

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLIX.

SATURDAY, DECEMBER 11, 1886.

No. 24.

ORIGINAL LECTURES.

ON THE TREATMENT OF PLEURISY WITH EFFUSION BY HAY'S METHOD.

*Abstract of a Clinical Lecture
Delivered at the Hospital of the University of Pennsylvania,
December 2, 1886.*

BY WILLIAM OSLER, M.D.,

PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF PENNSYLVANIA.

GENTLEMEN: You have had in the ward classes during the past month, several interesting cases of pleurisy, which have familiarized you with the clinical history and physical signs of the disease, and I shall, to-day, first direct your attention to certain points in the plan of treatment which we have followed. Let me briefly summarize the history of the cases.

CASE I.—A. B., aged twenty-three; admitted on the 21st. He had been a healthy man. Three days before admission he was caught in a rain-storm and remained all day in his wet clothes. The following morning he had pain in the head, neck, and right side; in the latter situation the pain was of a sharp, stabbing character, and increased by drawing a deep breath. He had fever, lost appetite, had also a sore throat and diarrhoea. When admitted the face was flushed, the respirations 34 in the minute, pulse 100, and temperature 101° . He lay on the left side. Examination showed deficient expansion on the right side, with jerky, inspiratory movements. There was a distinct friction fremitus to be felt and heard below the right nipple, and there was slight dulness in lower axillary and infrascapular regions. On the fourth day the temperature was normal, and there were signs of effusion to the level of the fifth rib.

CASE II.—J. M., aged twenty-four, a well-nourished young man, was admitted on November 12th. In 1883 he was poisoned with arsenic, and is now ataxic, the result, apparently, of a peripheral neuritis. His present trouble began three weeks before admission. Four or five days after exposure to cold and wet, he felt a pain in the right side and had a cough, with fever and occasional sweats. He did not go to bed, but gradually got short of breath, and for this symptom he sought relief at the hospital. Shortly after his admission I called your attention to the characteristic physical signs in this case. The effusion was in the left side and reached as high as the lower border of the second rib. The heart was displaced and there was an impulse near the right nipple. You saw him in clinic two weeks ago to-day.

CASE III.—William G., aged twenty-three, admitted to the Philadelphia Hospital October 12th with shortness of breath. He had been ailing for seven weeks. Had never had a chill or pain in the side. Had been feverish at times; had sweated and had been gradually getting short of breath. Though not able to work, he kept about and had not been in bed. There was left pleural effusion with absolute dulness reaching to the clavicle and displacement of the heart to the right; with the

hypodermic needle the fluid was determined to be serous. He had been drinking before admission, and for nearly ten days there was mild delirium tremens.

The effusion in these cases varied from the slight amount in Case I., which would probably have disappeared in time without medication, to the large exudation in Case III. filling the side of the chest. In treating pleuritic effusion we have to choose between medicinal and operative measures, and these cases illustrate the rules which I have already laid down for your guidance. In the first two cases the symptoms were not urgent, the condition of the patients good and the duration of the disease not prolonged. In Case II. we were in doubt whether or not to aspirate, as the line of dulness reached to the second rib; but I am glad we decided to try first the effect of medicines.

Now the usual routine in treating pleural effusion is to give purgatives, diuretics, and diaphoretics, but the plan to which I wish specially to call your attention this morning is the use of concentrated solution of saline cathartics introduced by Professor Mathew Hay, of Aberdeen. We have employed his method extensively in dropsies from various causes and with very satisfactory results.

Dr. Hay found, when investigating the physiological action of saline cathartics, that if the salt was given in a very concentrated form, when the intestines of the animal contained very little fluid, it produced a very rapid concentration of the blood owing to the abstraction of water to form the intestinal secretion excited by the salt. If the saline was not given in concentrated form or was administered at a time when the bowel contained much liquid, the action upon the blood was very slight. The effect is very rapidly produced; in one instance, in a man after giving six drachms of sulphate of soda, the number of blood corpuscles per cubic millimetre rose from 5,000,000 to nearly 7,000,000, owing to the great loss of liquid in the free purgation. A few hours later this increase was no longer apparent, as the blood had rapidly abstracted the tissue fluids and so replaced the amount lost. You know that the pinched, shrivelled aspect of a person who has had a severe choleraic attack is due in large part to the absorption of the tissue lymph to supply the rapid waste caused by the liquid stools.

It is on this principle that the use of cathartics in dropsical effusions is based, and Hay's method is new only in the application. In the administration of the salt, the solution must be concentrated, and taken at a time when there is very little fluid in the intestines. Our usual plan is to order the patient to take nothing after the evening meal, and then, an hour or so before breakfast, the salt is given dissolved in as little water as possible. The sulphate of magnesia is preferable to the sulphate of soda, as it is more soluble. Four or six drachms in an ounce of water is the usual dose, but two ounces, or even more, may be given. The patient must not drink after it. This usually produces from four to eight

watery stools, without pain or discomfort of any sort. It very rarely disagrees, though you remember in the case of Mrs. C., the patient with extensive anasarca from Bright's disease, we had to give up this plan on account of the vomiting it induced. Dr. Hay calls attention also to another point which we have repeatedly verified, namely, that the salt acts also as a diuretic. He found experimentally that the blood underwent a second concentration, not so marked, but lasting for the greater part of the day, and this he rightly attributed to the diuretic action of the absorbed salt.

Case II. is a striking instance of the value of this plan of treatment. Two weeks ago I demonstrated to you that the fluid reached as high as the third rib, and was rapidly subsiding. He has been given every second morning, since his admission on the 12th, half an ounce of sulphate of magnesia in an ounce of water, and, as you can see by the chart, this has produced from three to nine watery stools. His diet has been restricted somewhat in liquids, but he has had no other medicine. We find now, on examination, good expansion on the left side; the heart has returned to its normal situation; on palpation a distinct friction can be felt in the axillary region; tactile fremitus is present; on percussion the note is clear in the antero-lateral regions, and posteriorly it is resonant almost to the base; the breath sounds are heard well over the whole side, with the exception of the extreme base, where they are still feeble. The patient was discharged the day before yesterday to go on duty as night watchman on the surgical side. We may regard this as an exceptionally good result. It is the third instance in which I have seen a large effusion disappear rapidly treated by Hay's method.

Exudations of less extent will sometimes disappear in a few days. Case I. we saw early in the acute stage, and, to relieve the distress, he was wet-cupped with marked benefit. This is a measure which I do not often employ, as I find that morphia subcutaneously fulfils the indication; but here the pain was rapidly relieved and the breathing became much quieter. The effusion in this case reached only to the fifth rib. He had four or five doses of the concentrated saline solution, and was freely purged. To-day there is scarcely a trace of fluid, and you notice that, on percussion, the lung is clear almost to the extreme base.

In Case III. saline cathartics were also employed, but other and more prompt measures were indicated. The left chest was full, the percussion note on the clavicle was absolutely flat, and the fluid had been accumulating for at least seven weeks. Under such circumstances the withdrawal of some of the fluid was imperative. It is a good rule to aspirate when the fluid reaches the second or third rib. The removal of from twenty to thirty ounces will often suffice, and you can trust to medicines to remove the balance. When you find the fluid at the level of the clavicle, aspirate at once, as connected with this condition there are certain dangers which we cannot ignore. Such patients are liable to sudden and alarming attacks of dyspnoea. This occurred in Case III., and my house physician, Dr. Donohue, wisely withdrew at once between two and three pints of fluid. There are instances, also, of sudden and fatal collapse under these circumstances. Such a case occurred last spring in the Philadelphia Hospital, when I was on duty for my colleague, Dr. Tyson. A

woman was admitted, stated to be suffering with pneumonia. I saw her for a few minutes at the conclusion of my visit, and made a rather hasty examination, and determined the existence of dulness on the left side. She died suddenly and unexpectedly the next day, and, to our mortification, we found the left chest full of fluid, the lung greatly compressed, and the heart pushed far over. We could not determine the cause of the sudden collapse, but I feel certain it might have been averted by timely aspiration.

In Case III. we would not trust to the saline cathartic alone as the patient's general condition was not good. He was aspirated twice subsequently, and had an occasional morning purge. At present he is convalescent, has gained in weight and strength, and although there is still dulness at the left base, I believe it is due chiefly to thickened pleura and not to fluid.

My experience with this method is sufficient to justify a strong recommendation of its merits. In the general dropsies—renal or cardiac—the results have been equally good. There have been failures, to one of which I have already referred, and I have on several occasions heard complaints of nausea following the strong and bitter solution. In another case, last summer, the patient, a young man, thought the daily purgation and a rather dry diet terrible hardships, and he escaped from the hospital.

The essence of the method lies in getting the strong salt into the intestine at a time when the fluid contents are scanty. The concentrated bitter solution excites a copious secretion from the intestinal glands, which distends the intestine and induces rapid peristalsis. Saline, as well as other purgatives, have long been employed in the treatment of dropsies, but this plan of Hay's is so simple, produces so little irritation, and at the same time acts powerfully, and, as you have seen, effectually, that with us it has superseded other methods in cases in which we wish the action of a powerful and prompt cathartic.

ORIGINAL ARTICLES.

LAPAROTOMY AS A DIAGNOSTIC RESOURCE.¹

BY T. GAILLARD THOMAS, M.D.,

CLINICAL PROFESSOR OF DISEASES OF WOMEN IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

DURING the last century medicine has been slowly but steadily rising from the lower level of the arts and gradually assuming its place among the sciences. Empiricism has gradually given way before logical deduction; the dogmas of the schools and the dicta of the masters have gone down before clinical research and experimental demonstration; and the theorist of the closet and the bookworm of the library have been replaced by the chemist, the anatomist, and the microscopist.

Up to this period the opinions of the masters were all powerful; since that time abstract principles have become worthless: facts capable of demonstration to our senses rule the hour and control professional thought. As this salutary change has developed, every observer must have been struck by the fact that one of

¹ An essay read before the New York County Medical Association.

its chief factors, and, at the same time, to a certain degree, one of its direct results, has been the great development of the art of diagnosis accomplished by the subordination of theoretical methods of exploration and investigation to those which are purely physical.

Our knowledge of diseases of the chest entered upon the road to rapid advance under the influence of percussion and auscultation; of affections of the larynx under that of the laryngoscope; of those of the eye under that of the ophthalmoscope; and cutaneous diseases are only now fully experiencing the great boon of the microscope. For diagnosis instruments of precision have done fully as much as clinical thermometry has accomplished for the practice of medicine, the microscope for minute anatomy, or medical chemistry for the clinical study of renal disorders.

Some philosopher has said that if to-day the production of iron were suddenly to cease society would at once and rapidly retrograde, and in a few centuries would have reached, in its downward progress, the level which it occupied in the bronze and stone ages. That this bold and comprehensive postulate is correct no reflective mind will, I think, be inclined to doubt. It is equally true that, if the instruments of precision just mentioned were taken away from medicine, our art would steadily go backward until it reached the level of empiricism which it occupied in the days of Rhazes, Hally-Abbas, and Avicenna.

What I have said, so far, is prefatory merely to the proposition that if we are in our day to advance in the art of diagnosis there is but one avenue open to us—that which leads directly to the subordination of theory to fact; which replaces abstract surmise, however ingenious and plausible it may be, by physical demonstration, and which substitutes the blunt evidence of our senses for the most polished processes of ratiocination.

Throughout the domain of surgery there is no field in which diagnosis is more surrounded with difficulties than that of abdominal neoplasms. This is due to three facts: first, the superposition of the intestines; second, the great thickness to which the abdominal walls commonly attain; and third, the accumulation of gases in the intestines, which increases all preëxisting difficulties of exploration. Previous to the time when antiseptic precautions rendered the opening of the peritoneum a safe and warrantable procedure, even when the case was not one of life and death, the diagnosis of abdominal tumors was allowed to rest upon deductions capable of being drawn from rational and physical methods, the latter of which were limited by the abdominal walls without and the pelvic roof within. To-day, surgeons devoting themselves to this department of our art fully agree as to the propriety of opening the abdominal walls for the purpose of exploring the viscera fully by touch, and, to a limited extent, by sight.

It appears to me that no more important era has of late years marked the advance of abdominal surgery than the general recognition of the fact that when doubt exists as to the diagnosis of abdominal

neoplasms or the significance of certain pathological conditions within the peritoneum, the question at issue should be settled by explorative incision. So fully am I individually convinced of the propriety of this practice that, were I called upon to select a motto for the walls of a hospital devoted to abdominal surgery to-day, I should, without hesitation, select this one: "When a doubt as to the diagnosis of an abdominal neoplasm of serious character or of certain obscure pathological conditions of the abdominal cavity which threaten life exists, give the patient the benefit of explorative incision." And this mural legend should always stand before the eyes of the doubtful diagnostician, that it might prove a constant reminder of a most important duty.

After an experience yielded by seven or eight hundred cases; approximately, of laparotomy for various causes, extending over a period of twenty-three years, I am very sure that I can say with entire truth that I have never once regretted opening the abdomen, and that I have in a dozen cases, at least, deeply regretted having failed to do so. It is in my mind certain that in the future explorative abdominal incision will become the rule in all cases of the following conditions which do not yield to medical means, and concerning the etiology of which there is great doubt: first, wounds and injuries of the abdominal viscera; second, intestinal obstructions; third, the presence of stones in the gall-bladder or kidneys; fourth, the accumulation of blood, pus, or serous fluid from any cause; fifth, the existence of a neoplasm in any part of the abdomen; sixth, the occurrence of serious organic changes in certain of the viscera of the abdomen, such as the kidneys, the uterus, the Fallopian tubes, the ovaries, or the spleen; seventh, ectopic gestation.

It is a remarkable fact, and one which constantly excites the wonder of the uninitiated, how grave errors of diagnosis in reference to abdominal tumors are made by men of the largest experience, the maturest judgment, and a life-long devotion to the work of gynecology. The truth is, that all over the world, errors in diagnosis in the field of abdominal tumors are, and probably will forever be, common, unavoidable, and, except in rare cases, entirely excusable. He who declares that he does not frequently err belongs to one of two classes: that of those who lack the intelligence to appreciate their shortcomings or the courage to confess them, for it is only the good diagnostician who can afford to own to diagnostic errors, or to that of those who by *suppressio veri* or *suggestio falsi* are short-sighted enough to hope to deceive the community which watches their careers.

It is for the purpose of avoiding such errors that explorative incision is peculiarly valuable. It may be that there is doubt as to whether a neoplasm is a fluid tumor of the ovary or a solid one of the uterus; or whether an abdominal dropsy is due to incurable hepatic disease, or to some tumor no larger than an apple situated deep down in the pelvis; or as to the benign or malignant nature of some growth about which nothing positive can be settled. In such cases the results of opening the abdomen are most striking and gratifying; they beam upon the

existing obscurity as the rays of an electric light upon previous darkness, and even although the result of the incision may serve to assure us merely that death will very soon close the scene, this certainly is better than the cruel uncertainty which previously existed, and the grief of relatives is assuaged by the feeling that "no stone has been left unturned" to procure a relief which science is powerless to bestow.

I know of no way in which I can better convey my views and give my experience upon this subject than by mentioning first some cases as examples of the class in which I have had to regret non-interference on my part, and then relating others in which more active measures have produced happier results.

CASE I.—About seventeen years ago I was called to Fordham by the late Dr. Wohlfarth, to see a strong, healthy young coachman, about twenty-five years of age, who had been suddenly seized with obstruction of the bowels, which had resisted all medical means, and which was, evidently, going to result fatally. The abdomen was immensely distended, and, except when under the influence of opium, the patient suffered great agony. The question of laparotomy was carefully canvassed, and, unfortunately, we decided not to perform it. The patient died, and, on a post-mortem examination, a loop of intestine was found constricted by a false membranous string, the result, probably, of some long-past peritonitis. This, as was apparent as soon as the abdomen was opened, was the sole cause of the obstruction, and could at once have been overcome by the snip of a pair of scissors. At that time laparotomy, had it failed, would have met with universal condemnation; we probably lacked moral courage to meet the issue, and we let the poor fellow die, "hoping against hope," for a relief which became less and less likely to occur with every hour that elapsed.

CASE II.—About fifteen years ago, Prof. F. N. Otis asked me to see, with him, a woman who for years had suffered from a uterine fibroid. This had gone on growing until, when I saw the patient, it weighed forty pounds. It filled the whole abdomen, and pressed so much upon the viscera under the diaphragm that it was evident that the patient would soon be exhausted unless the neoplasm was removed. The question of extirpation of the tumor was carefully considered, and the decision was left to me. At that time the operation was very rarely performed, and still more rarely was it successful. I decided against operation and the patient died. Upon autopsy, a tumor weighing forty pounds was found, entirely unattached, in the peritoneal cavity, and connected with the uterus by a pedicle not larger than the ring and middle finger placed side by side! Removal would have been easy, and recovery would have been likely; but, influenced by the spirit of the times, which frowned upon the removal of large, solid tumors of the abdomen, the operation was not put at the patient's disposal. An explorative incision would have made the practicability of the operation quite evident.

CASE III.—In the early part of my experience as an ovariologist, a lady, suffering from a very large

abdominal tumor, called upon me, with the statement that she had consulted the three most eminent operators living in this country at that time; that they had all agreed that her tumor was a solid one connected with the uterus, and had all advised against operation. Before deciding fully to abide by this advice, she had come to consult me. After a careful examination I agreed to the opinions already expressed. The patient went home, and in about a year died. Upon post-mortem examination the neoplasm was found to be a multilocular ovarian tumor, entirely free from adhesions, with a small pedicle, which could have been removed with every prospect of success. The reasons for the obscurity of the diagnosis were the following: the tumor was composed of innumerable small cysts; the walls of these were thick, and the fluid within them colloid.

CASE IV.—During the early portion of my service as visiting physician to Bellevue Hospital, a strong and healthy young Irishman was brought into my service suffering from intestinal obstruction. This resisted all the means that could be resorted to except only laparotomy, and this, after careful consideration with some of my colleagues, was rejected. The man died, and upon post-mortem examination the following very curious condition of things was found to exist: the transverse colon, at its middle, was distended into a kind of a sac, which was filled with hardened fecal matter, held in an indissoluble mass by a quantity of hay, such as is fed to horses, which penetrated it in every direction. It is certain that, upon abdominal section, this would have been readily discovered, and it is probable that, by a process of kneading, it could have been dislodged and pressed onward toward the rectum. I made every effort to find out what could have induced the man to swallow the hay; all that I could learn in explanation was that he was subject to periodical debauches, during which he did the most extraordinary things. His friends thought that during one of these, either upon a bet or from mere bravado, he had swallowed the hay, although they had no positive information about the matter.

CASE V.—I was called in great haste to see, in consultation with three other physicians, a nulliparous lady who, after having suffered from absence of the menstrual discharge for three months, was suddenly taken with severe abdominal pain, faintness, and exhaustion. Physical examination, which could be practised only at great disadvantage, revealed the presence of an obscure, fluctuating mass in the pelvis. I was convinced that the case was one of extrauterine gestation, which had resulted in rupture of the foetal nidus and in hemorrhage, and I urged the propriety of explorative incision. My colleagues differed from me in diagnosis, and another physician was added to the consultation. At our final meeting the vote stood two in favor of laparotomy and three opposed to it. The patient died, and upon post-mortem examination a three months' foetus was found in the Fallopian tube, at its fimbriated extremity. The amniotic sac was unbroken, but a slight rent had occurred in the muscular covering of the sac, which had opened an artery of sufficient size to cause death by hemorrhage in the three days which elapsed

between the inception of the accident and the fatal result.

I regret to say that I could more than double the number of cases illustrating this part of my paper, but I will not tax the patience of the Society by doing so. In my own defence, I will remind my hearers that almost all of this variety of my cases occurred fifteen or twenty years ago, and that this number of years, so rapid has been the recent advance of abdominal surgery, carries us back into the ancient history of the subject. Few such cases occur to me now, for the very reason that I am a strong advocate for explorative incision as a diagnostic resource.

Turning now to more pleasant recollections of my past experience, I will give a few cases illustrative of the brilliant results which commonly attend upon the practice of explorative incision as an aid to diagnosis. I ventured to number the unfortunate results which have occurred in my experience from a neglect of resource. Were I to record even a tithe of the cases in which life has been saved by a resort to it my time and your patience would alike be exhausted.

CASE VI.—A patient was brought to me for abdominal dropsy, for which paracentesis had been repeatedly practised, and in whose pelvic cavity a solid tumor, the size of the adult head, could be distinctly felt. This was regarded as a large uterine fibroid, the presence of which had induced ascites, and the removal of which was regarded as entirely impracticable on account of the weak and exhausted condition to which the patient had been reduced. I proposed explorative incision, agreeing with the relatives that I would be governed by the light which this shed upon the case as to my subsequent action. As soon as my hand passed into the abdomen what before was obscure became perfectly plain. The abdominal fluid was not the result of ascites, but was ovarian fluid poured forth from a ruptured ovarian cyst, which, in its collapsed state, now occupied the pelvic cavity, giving rise to the belief that it was a fibroid. The operation for the removal of the sac was an exceedingly simple one, and the patient made a rapid recovery.

CASE VII.—An unmarried woman was sent to me by Dr. Woodward, of Brandon, Vermont, for almost complete amenorrhœa and such agonizing pains at menstrual periods that the most powerful anodyne medicines were inadequate for her relief. Upon vaginal examination what appeared to be a uterine fibroid as large as a goose's egg, could be felt on each side of the uterus and filling the iliac fossæ. The patient's family were told that a positive diagnosis was impossible without explorative incision, and this was made. Upon introducing my hand the tumors were found to be due to excessive distention of the Fallopian tubes with blood, constituting perfect specimens of hemato-salpinx. The overdistention of these muscular canals gave rise to the sensation of solidity. Both tubes, with their corresponding ovaries, were removed, and the patient was entirely cured.

CASE VIII.—This case I record as illustrating the fact that cases of abdominal tumor are sometimes utterly beyond the realm of diagnosis. Mrs. W., a

woman of forty-five years, had been married fifteen years, but thought that she had never been pregnant. Early in married life she was supposed to be so, but she had never miscarried, and never borne a child. She came to me with a cyst the size of the head of a child a year old, and a hard round tumor which I supposed to be a calcareously degenerated fibroid behind the uterus. In three months from the time when I first saw her she fell suddenly into an almost collapsed state, and suffered greatly from pain in the tumor, which nearly doubled in size in a day or two. Her condition became so desperate after this that I operated to give her the only chance for life which presented itself.

A large blood cyst was emptied, and from the distended pouch of Douglas I shelled out the skull of a fetus of probably six months' of intrauterine life. She had suffered fifteen years before from abdominal pregnancy; the child had died, and all but the skull had disappeared by absorption.

The patient did well until the sutures were removed on the tenth day, when she developed cardiac thrombosis, and died of it. The sudden increase in the size of the tumor and the accompanying collapse, were due to hemorrhage from the cyst wall.

CASE IX.—Some years ago I removed from a lady in Brooklyn two large ovarian sarcomas. She recovered and went to Oswego to live. About three months afterward she was taken with constipation, which soon ended in complete obstruction. The patient was thoroughly convinced that I had occluded the intestines by encircling them with a silver wire, and I went to Oswego to see her in consultation with her physician, Dr. Clark. She had not at that time had an alvine evacuation for a fortnight. I at once performed laparotomy, and found a considerable portion of the large intestine encircled by a malignant mass, probably sarcoma. The whole peritoneum was studded with the same. The wound was closed and the patient died at the end of a month.

There is one class of cases in which in my hands explorative incision has yielded such brilliant results that, even with the fear of making my paper too long, I shall devote full consideration to it. I allude to cases of ascites in the female.

This condition is universally regarded both by the medical profession and by the public as a prognostic sign of the gravest significance and most important bearing. This is true of the condition whether it presents itself as an independent, isolated, and perhaps entirely solitary pathological state, or as one secondary to dropsy of the extremities beginning in the face or in the feet. But it is to dropsy limited to the peritoneal cavity that my remarks in this connection will have reference.

It is a clinical fact which teachers might well impress upon the minds of students as an elementary axiom that there are three great sources of dropsy: first, dropsy due to disease of the heart, which first gives evidence of its existence by œdema pedum; second, dropsy due to disease of the kidneys, which first marks its access by œdema in the areolar tissue beneath the eyes; and third, dropsy due to organic

disease of the liver, which causes accumulation of the watery elements of the blood within the peritoneal cavity. To all general rules in medicine, as elsewhere, there are exceptions, but there are few to this one; or at least I should say that my personal experience leads me to believe so.

The causes of ascites may thus be enumerated as to frequency of occurrence:

- 1st. Organic diseases of the liver.
- 2d. Chronic peritonitis.
- 3d. Tubercular peritonitis.
- 4th. Malarial spasmia accompanying great splenic enlargement.
- 5th. The existence of neoplasms within the peritoneal cavity.
- 6th. The prolonged existence of excessive fecal impaction.

All these conditions, except the last, will so readily be admitted as common factors of the great symptom of which we are speaking that no special allusion to them will be necessary. The last will not be admitted by those who have not had personal experience of it. I will merely say that I have had such experience, and that I am as perfectly convinced of the truth of my sixth proposition as to etiology, as I am to that of the five which precede it.

Of these causes of ascites but one concerns us here; the existence of neoplasms within the peritoneal cavity. This class of causes will, as to its authenticity, be disputed by no one. We see it in rare instances active with all varieties of solid tumor of the uterus and of fluid ones of the ovary. This is so well recognized as a fact, that it requires no further consideration at my hands, so far as the general proposition is concerned. The special proposition which I would make in reference to it is this, that some cases of excessive ascites, which by repeated tapplings prove fatal, are due to insignificant uterine or ovarian tumors, which are too small for recognition, unless specially and carefully sought for, and the removal of which relieves the fluid accumulation which by its exhausting influence destroys life.

These tumors are sometimes no larger than small apples, and cannot be recognized except by the careful examination of an expert. In stout women, or even in those that are thin, after accumulation of ascitic fluid, they cannot be discovered even by a master in diagnosis. And, as I have had sufficient evidence in my experience, in some cases even when a tumor in the pelvis, as large as a cocoanut coexists with ascites, no connection between the two pathological conditions as cause and effect are ordinarily traced by the medical attendant.

Should this be the case, should the existence of the neoplasm not be detected, or should its malign influence not be appreciated even when its presence has been diagnosed, but two resources present themselves to the physician: First, to cause absorption of the effused fluid by pressing into action the three great emunctories of the body, the skin, the kidneys, and the alimentary canal; second, to remove the fluid by aspiration or by tapping. The first of these usually fails. If it does not fail, the

cause of the symptom remaining after the symptom itself has been removed, frequently repeated resort has to be had to the plan, which in time impairs nutrition and exhausts the vital forces.

If tapping or aspiration is employed "the beginning of the end" soon shows itself; the practitioner has early demonstrated the converse of the old Hippocratic maxim "*causa sublata tollitur effectus*," and it becomes merely a question of time how long the system of the patient will bear the exhausting drain to which it is exposed.

I have met with a number of cases in which I have succeeded in completely curing aggravated cases of ascites, after tapping had been repeatedly resorted to, and after all hope of recovery had been given up.

I shall not weary the Society by a report of all these, for proof does not consist so much in a long array of cases as in the portrayal of a few select and characteristic instances which clearly point out the pathological conditions which have been assumed as factors, and give evidence of the restoration to health effected by their removal.

CASE X.—Mrs. C., of Durham, Conn., came to me about ten years ago suffering from ascites, for which she had been repeatedly tapped, and from which she was rapidly growing weaker; so that death at an early period seemed certain. After each tapping a round hard tumor about as large as the head of a five year old child, could be readily detected in the pelvis, and this could be obscurely felt even when the dropsical effusion existed.

I opened the abdomen as an explorative procedure, and finding a fibroid attached to the fundus uteri, removed it. The patient is perfectly well today, the dropsy having immediately disappeared.

CASE XI.—Mrs. B., of Canada, came to me with ascites, which was accompanied by the presence of a solid tumor over one ovary, as large as a cocoanut. She had been tapped once only. I removed a solid tumor of the left ovary, and she entirely recovered, and has remained free from dropsy for two years.

CASE XII.—About a year ago Dr. Hurlbuth, Jr., of Stamford, Conn., sent me a patient suffering from ascites, in whom I could detect, by vaginal touch, what seemed to be a pelvic neoplasm. I made an explorative incision, found a tumor in Douglas's pouch no larger than an apple, which I removed, and the patient recovered from the operation and from the abdominal dropsy. The tumor, examined by Dr. Coe, Pathologist of the Woman's Hospital, was pronounced sarcoma. I have just received the following report of the case from Dr. Hurlbuth: "Since the operation the patient has been perfectly comfortable, but now a hard tumor can be felt occupying the pelvic cavity, and ascites is gradually beginning again to demonstrate its existence."

It is highly probable that without removal of the malignant growth the case would long ago have ended fatally.

CASE XIII. was a counterpart of Case III., except that the post-uterine tumor was a benign fibroid attached by a rather slender pedicle to the posterior wall of the uterus. The patient, who was an inmate of the Woman's Hospital, left that institution at

the end of a month well; but since that time I have lost sight of her.

It is very difficult indeed, I may say impossible, to tell why in a certain small number of cases these tumors create ascites while in other cases they may occupy the peritoneal cavity for years, without causing any such trouble; but that such is the fact is beyond question.

CASE XIV.—I saw some years ago, with Dr. Emil Noeggerath, a lady who suffered from severe enteralgia, which was created by the presence of an ovarian cyst as large as an adult's head, which was so migratory in its nature that it could be pushed anywhere in the abdomen from the pelvic roof to the diaphragm. As there was no urgency in the case, and as the patient and her friends dreaded surgical procedure to a morbid degree, we decided to avoid interference. Fourteen years passed and I was again called in counsel by Dr. Noeggerath. The tumor was only about double the size which it had been fourteen years before, but its nomadic tendencies had created ascites, which was greatly distressing the patient, who now clamored for relief by surgery. I assisted Dr. Noeggerath in the removal of a monocyst with the longest pedicle that I ever saw in an ovarian tumor. The patient rapidly recovered, and has been ever since free from ascites.

It is rare to find even a monocystic ovarian tumor running so long a course; but I have removed one which had lasted for twenty-four years, another of sixteen, and another of nine years' duration.

In Dr. Noeggerath's case doubtless the extreme mobility of the cyst had a great deal to do with the resulting irritation of the peritoneum, and the development of dropsy. Such a complication of ovarian cysts is extremely rare.

This array of cases represents just about half of those that I have seen which serve to illustrate this point. It appears to me that resting for justification upon them, I may assume the position that in cases of ascites in the female, before the patient is relegated to the usual practice of repeated tapping with its universally barren results as to cure, the most thorough investigation as to the possible existence of small neoplasms as important pathological factors should be made, and if signs of their existence be obtained, explorative incision should be practised as a "forlorn hope" that relief may be obtained. That brilliant results will often occur I do not maintain. But that they will do so with a frequency sufficiently great to make it a duty to give the plan a claim to consideration, I positively assert from the experience which I here place on record.

There are but two points connected with explorative incision which I would mention before closing. The first is the singular, and to me inexplicable fact, which I think every man of large experience will substantiate, that in certain cases of abdominal incision in which diagnosis only is practicable, and others in which removal of the tubes and ovaries proves to be impossible, great improvement sometimes results to the patient's general and local condition, from the explorative effort alone.

The second point which I would mention is the necessity for certain rules which should be observed

in the performance of this simple surgical procedure.

RULES FOR EXPLORATIVE INCISION OF THE ABDOMEN.

1st. Every explorative incision should be made under the strictest antiseptic precautions. As to strict cleanliness all are agreed; if antiseptics of chemical character are valueless, they at least, in all probability, do no harm; while the question as to their utility is "sub judice," give the patient "the benefit of the doubt," and employ them.

2d. Always employ an anæsthetic, lest the complaints of the patient should frustrate the investigation, or at least render it superficial and uncertain.

3d. Always make an incision which will admit the whole hand; one which will admit two fingers only is hardly warrantable. If possible, let but one man's hand be passed into the abdominal cavity; in a multitude of counsel there is, in these cases, danger. The brain which guides the hand should be competent for deciding the question at issue.

4th. Never hurry an explorative incision, but never prolong one unnecessarily; let discussion as to diagnosis occur after the peritoneum is closed, not while it is open; and let the fact be appreciated that the clinical lecture, which is so common at this moment, is always a source of great danger.

INFLUENCE OF THE RECENT EARTHQUAKE SHOCKS IN CHARLESTON UPON HEALTH.

BY F. PEYRE PORCHER, M.D.,
PHYSICIAN TO THE CITY HOSPITAL, CHARLESTON.

In addition to the natural alarm and fright—especially among women and children—caused by the recent calamity, where so many persons were suddenly brought face to face with death under the most appalling circumstances conceivable, and in every variety of situation and condition, I have gathered the following facts from personal observation and inquiry. They are interesting because rather unique in our experience in this country.

As the result of the shocks, some persons were instantly attacked with nausea accompanied by vomiting, which recurred or persisted in several cases for days.

Mrs. M. was nauseated during the first shock (Aug. 31) and had repeated attacks afterward, with vomiting and nervo-electrical disturbance. Miss M. was nauseated at the first vibration, and before she could leave her chamber. Mrs. K. was absent Aug. 31, but in all the subsequent shocks she suffered from giddiness, with a feeling as if the floor was trembling under her feet, and experienced "instead of sadness, a tendency to laughter." There was no tingling or electrical disturbance. She was nauseated but once. Mr. S. and Mr. H. had nausea, and both had colic and diarrhoea following, on the night of August 31. Mrs. G. suffers from extreme nausea after every shock. She was sound asleep after the second shock (Friday, 28th Sept.), yet woke up nauseated. I could give numerous examples of a similar character.

Mrs. M., Mrs. S., and Mrs. D., experienced for a long time a feeling, whether real or imaginary, of

tremors—as if the floor or the earth were incessantly moving under their feet. Similar sensations were felt by persons living in the country. Many of those residing on the coast declare that delicate and almost imperceptible vibrations are constantly felt. Mrs. C., living some distance from this city, experienced a sensation “as if she was suspended in mid air.” One of my patients, Mrs. B., remarked, “The earthquake leaves you powerless; a flush and tingling come on before a shock—the whole body pulsating, with tears; everybody cried on account of pain in their knees and legs!” Mr. F. informs me that he would constantly anticipate the recurrence of shocks by his sensations—nervousness, tingling, etc. Two young gentlemen, on the islands eighty miles from Charleston, had their eyes suddenly filled with tears (Aug. 31), not to be repressed, but not caused by alarm, or fears for their personal safety; for the danger there was not imminent. These examples could be multiplied by the relation of others, if more extensive inquiries were made.

The commotion, attrition, and tremblings of vast masses of earth might not only squeeze out water, sand, and gases, but very naturally generate electricity on a tremendous scale which would affect those who were specially sensitive.

I have the statements of many persons, that they experienced decided electrical disturbances, which were repeated upon the successive recurrence of the shocks. These were generally tingling, pricking sensations, like “needles and pins,” affecting the lower extremities. A few may be cited: Judge —, in a town far removed from this city, immediately after the great shock, inquired of Mr. A. “How do you feel?” The reply was, “As if pricked by needles and pins!” To which he rejoined: “That is precisely my experience!” The Rev. —, when asked as regards the effects produced upon him, stated that it was “an electrical thrill—after and with all the shocks: exactly what he had before experienced in his frequent use of the electric battery.” His sister was similarly affected. Mr. S. feels the nervous sensation *before* the shocks occurring at night—never in the day.

A child of one of my patients would give immediate notice of the approach of a shock, night or day, but oftener at night, by calling aloud; being far more keenly alive to them than the adult members of the family, or than his mother, who generally kept awake. The inability to move his leg, caused by a recent sprain of the knee from which he suffered, was greatly increased after each occurrence of shocks. His leg would then remain stiff and contracted. Another, Mr. B., assures me that he could always anticipate and know of the approach of a shock by his peculiar nervous electrical sensations. Miss K. says she could feel the effects of the shocks “beginning in her big toe” and extending with a tingling sensation upward. One gentleman has been completely relieved of his rheumatism; another, who for months was nervous, depressed, and entirely unable to attend to any business, has regained his former activity and energy through the influences generated by the repeated convulsions of nature.

A gentleman on a visit to Columbia, awakening from a dream, experienced such sensations as to inquire whether a shock had not just occurred; his daughter replied affirmatively, and “that every thing was electrified!” In another individual (Dr. F. informs me) the vibrations affected his dreams, and upon awakening he would announce what had occurred. In a recent attendance upon Mrs. D., she stated that on three occasions *before* a shock occurred, she became dizzy and sick, and grasped a post or other convenient object for support.

With regard to my own experience: Whilst seated in the N. E. R. R. depot, awaiting the arrival of friends, the great earthquake disturbance occurred, when the foundations of the earth were felt to move and surge under our feet. This drove us out of the room and across the open street. I sought the protection and support of a telegraph pole on the opposite pavement in order to avoid the flying horses and vehicles, which could scarcely be seen through the sudden darkness—not wholly caused, I think, by the dust, which latter attracted the attention of every one. In this position I was not conscious of the second shock, except that I experienced suddenly, great *nervous exhaustion* about the back and loins, and a sensation almost of pain. I am convinced, upon reflection, that it was wholly electrical, and similar to that experienced by others. I was not nervous, or particularly sensitive to the danger, as I wrote letters, and slept the remainder of the night, in a four-story brick dwelling which had lost every chimney, and was otherwise rent and injured. On another occasion, whilst engaged in adjusting a bandage for a fractured clavicle in a girl, aged thirteen, a pretty severe vibration occurred; I remained (“*impavidum ferient ruinæ*”), but the patient fled!

The following appeared in the *News and Courier* of a recent date:

“The concurrent testimony of the most trustworthy experiences indicates that there is an electrical accompaniment to the earthquake, whether as cause or effect. A lady, while she was in the market, felt the same tingling nervous sensation which she experienced during the disturbance on the night of Aug. 31st; she was again seized with the same sensation, but in a more pronounced degree. The electricity appeared to permeate her whole body, which was affected just as it would have been by the continuous discharge through her system of the fluid from a galvanic battery.”

I have seen in my own practice two cases of miscarriage and one of premature birth, and have heard of several others, consequent upon the earthquake—though no special inquiries have been made.

Several cases of mental disturbance, owing to anxiety and prolonged loss of rest, some of them persistent, have occurred in my own experience. One of these has not yet recovered her sanity. Exposure in tents and to the weather has been productive of much general ill consequences as was natural,—namely: Catarrhal fevers, bronchitis, and an aggravation of lung diseases generally, and of those dependent on derangements of the nervous and uterine systems. Several persons have, by reason of the successive shocks, been reduced to a highly nervous condition, where their emotion could not

be repressed. Dr. F., of Georgetown County, reports two such persons who will require to be sent to a more quiet abode. One of these occurred in an active, strong, hardworking man, who was not unnerved by the first commotion, but who had finally to succumb, with his nerves completely shattered. He confessed with pain and mortification the deplorable state to which he had been reduced. Hysterical attacks have also been developed in those previously well.

The most important premonitions of the great movement of the earth were three: 1. Almost entire absence of storm, thunder, lightning, and other electrical disturbances during the entire summer, with a very prolonged drought, which still continues. 2. A peculiar appearance of the sky and the atmosphere on the evening of August 31, observed and commented on by several persons. Very bright orange sunsets still prevail (Nov. 18). 3. Very oppressive heat and sultriness experienced by every one just before ten o'clock P.M., August 31. The smell of sulphur and gas was plainly observed after the convulsion of nature. This was also noticed by those on the incoming train of the N. E. Railroad, and was probably caused by the emanations from the extensive marshes of this region. With the exception of a little sulphur in the "green sand," that substance does not exist in the geological formation; one hundred to one thousand feet of marl underlie the superficial strata. Notwithstanding, a strong smell of sulphur is repeatedly observed before and after each shock by many residents of the coast near Georgetown, as I am credibly informed.

One lady of very delicate nostril—"femina emuncta naris,"—whom I attend in Summerville, where the premonitory rumbling and terraqueous disturbances are more marked, experiences a sensation of the smell of "sulphur and rhubarb" before each shock.

Dr. A. A. Moore, of Camden, S. C., in his report to the State Board of Health, September 23d, speaking of the effects of the earthquake shocks, says: "They at first naturally created much consternation among our population, and have undoubtedly had a very deleterious effect upon sick and feeble persons, being followed by much nervous prostration and other unpleasant symptoms. Even upon well and robust people their effects have been striking in some instances. Some have described their sensations as being similar to those experienced after a shock from an electric battery. Others have experienced a very marked feeling of debility in their lower extremities; others have had vertigo, nausea, etc. Some, again, who were not affected by these unpleasant symptoms in the beginning, are now troubled by them."

Dr. H. M. Stuart, of Beaufort, also reports that "It was a curious fact to note the number of persons, both male and female, particularly females, who were nauseated by the shock of the earthquake. This, I suppose, is attributable to fear, but these persons, although acknowledging themselves frightened at first, disclaimed any fear during the subsequent shocks, and continued to suffer from nausea.

In a few other cases the effect of the nervous shock from the above cause was of a much more serious nature. In one case—that of a young lady—it caused hysterical convulsions."

It is several years since I read the *Kosmos*, but, if I remember rightly, Humboldt remarks therein on the "headache" and other morbid sensations which were experienced during the prevalence of earthquakes.

Domestic animals seemed to be exceedingly sensitive. Dogs howled, poultry were unusually noisy, and horses greatly alarmed. I give one instance which occurred to-day (December 2d). A very intelligent dog belonging to Mr. W., walked into the breakfast room about 8 A.M., got up from the fireplace, before which he had stretched himself, went into a corner of the room, and remained there trembling and shivering. His master remarking that the animal was mad, his little son, who had a similar experience previously, replied, "No; it is an earthquake." The true explanation was in a few moments realized in a well-developed trembling.

The same dog in awakening his master, who was asleep in a hammock during the disturbance of August 31st, nearly tore off his clothes, so great was his excitement.

ANTIPYRINE AND ARSENIC IN THE TREATMENT OF MALARIAL FEVERS.

BY DAVID B. FRONTIS, M.D.,
OF WADESBORO, N. C.

THE physicians who practise in malarious districts, not rarely meet with a class of patients suffering from malarial fever in some of its forms, who from idiosyncrasy or from some complication of the case cannot take quinine or any derivative of cinchona bark.

Within the past four months I have met with cases manifesting this peculiarity in intermittent, remittent, and a more indistinct type, generally classed here as simple malarial fever. Having during the past twelve months used the new antipyretic—antipyrine—with most gratifying results in phthisis, I determined to try it in this class of malarial troubles, using it to control the pyrexia, and putting the patient on full doses of arsenic to counteract the malaria.

Numerous notes on the value of antipyrine in various febrile affections have appeared in current medical literature during the past year. The fullest record of clinical experience with the drug, that the writer has seen, is Dr. Reilen's article in the *Deutsches Archiv für klin. Medicin*. This is a report of the use of antipyrine in the Nuremberg City Hospital, on eighty-nine patients suffering from eighteen diseases. There is only one case of intermittent fever in the list, and no special remarks on this. Nothing seems to have been written on its use in malarial fevers, perhaps, because we have in quinine a remedy as specific as we can ever hope to have, and also because it was soon found that antipyrine probably possesses no curative value in any disease, but is simply a very potent antipyretic.

When debarred from the use of quinine, the phy-

sician has a long list of remedies which are more or less useful, arsenic, calomel, chloroform, capsicum, ipecac, rhubarb, etc. Arsenic, however, stands at the head. While Bartholow, Wood, and Stillé, in their respective works, all speak of the use of arsenic in malarial affections, Brunton, in his recent work on *Therapeutics, Materia Medica, and Pharmacy*, gives it the highest testimonial:

"Arsenic is a powerful antipyretic, nearly rivalling quinine; it seems less serviceable than quinine in well-marked cases of ague, but it is sometimes as good or even better than it in the irregular malarious manifestations." (Page 609, *op. cit.*)

This more nearly accords with the general estimate placed upon it by Southern physicians. Another testimonial from high authority which seems to cover the class of cases that I am speaking of, is from Dr. Solis Cohen (*Maryland Medical Journal*, Feb. 6, 1886.), who in considering some of the forms of malarial manifestations and their treatment, maintains that "when the most prominent symptoms are connected with the nervous system . . . arsenic is indicated."

I shall here relate the clinical history of a few cases in which I combined these two remedies, antipyrine and arsenic, omitting, however, minor symptoms and complications, and the measures used to meet them.

CASE I. Intermittent Fever, Quotidian Type.—Adult, male, had chill at 8 A.M., July 10, second paroxysm followed by moderately high fever. Saw patient at 12 M., temperature 101.5° F.; fever had already begun to decline. This patient, quite an intelligent man, refused to take quinine or any derivative of cinchona, because it produced an eruption, which he described as "terrific" and far worse than ague. More to test its effect than because he needed it, I gave fifteen grains of antipyrine and directed that he take five drops of Fowler's solution every three hours for the next four days, and if the paroxysms were arrested then to continue it *t. i. d.* for several days longer, cautioning the patient to omit it for twenty-four hours if there should develop much swelling of the eyelids. Also left a fifteen grain dose of antipyrine to be given next day if there should be much fever. Patient reported a few days later that the antipyrine acted promptly in reducing fever. There was a slight chill next day, with a rise of fever, which was promptly checked by the antipyrine. After this no more symptoms of the ague. No unpleasant effects from the arsenic.

CASE II. Remittent Fever.—Adult, female, seen August 14th, temperature 102.4° F. Previous history of a remittent fever of three or four days duration. She had been taking from four to six grains of quinine per day. She objected strongly to taking quinine in increased doses, from the cerebral excitement which it produced, or, as she expressed it, "it made her crazy." I prescribed, however, twenty-five grains in divided doses in twenty-four hours. Next day I was hastily summoned, and found her madly delirious, with a temperature only 101.5°. Morphine to quiet delirium, ten grains of antipyrine to reduce temperature, one dose per day, and five drops of

Fowler's solution, every four hours, from 6 A.M. to 10 P.M. Fever disappeared in four days, but convalescence was not complete for two weeks.

CASE III. Remittent Fever, Bilious Type.—Adult, female, seen August 20th. This patient had fever for three days with a morning temperature of from 102° to 102.5°; evening from 103° to 104.8°. Took thirty grains of quinine a day. At 4 P.M., evening of third day, temperature 104.8°. Had given forty grains of quinine this day with not the slightest decline in fever. Conjunctiva injected, some delirium. Gave fifteen grains of antipyrine, at 5 P.M. temperature 103°, gave fifteen grains more of antipyrine. Shortly after this profuse diaphoresis was set up, and at 6 P.M. temperature was 98.5°. Stomach had been very irritable for three days, but patient now took some nourishment and passed a quiet night. Gave no more quinine or antipyrine, as there was no return of fever. Patient was up in her room in a few days, but in just one week there was a relapse. I then gave from fifteen to twenty grains of quinine every forenoon, and one dose of fifteen grains of antipyrine every afternoon. Temperature varied from 100° to 101.5° A.M. to 102° to 103° P.M. Antipyrine invariably caused a reduction of from two to three degrees, and there would not be a subsequent rise until the next morning. This attack lasted one week, and as the patient could not be induced to take quinine when there was no fever, was followed by another relapse. The same treatment was followed as in the last attack with the addition of five drops of Fowler's solution *t. i. d.* This was kept up until convalescence was complete.

CASE IV. Malarial Fever.—Adult, female, temperature varied from 100° to 103°, with irregular exacerbations. Seen first July 19th. Twenty-five grains of quinine were given per diem for one week, until temperature did not exceed 100° at any time during the day. There was great nervous excitement. Patient had not slept for several days and nights, with the exception of short naps induced by one-eighth of a grain doses of morphia. The bromides and chloral had no effect whatever. I then gave five drops of Fowler's solution every four hours, and directed that fifteen grains of antipyrine be given whenever the temperature went to 101°. Nervous symptoms abated, appetite improved, and there was some return of strength. Temperature did not decline further, but on the fourth day of this treatment began to rise, and on the evening of the sixth went up to 102.5°. Went back to quinine, giving thirty grains from 6 A.M. to 12 M., and from ten to twenty grains of antipyrine every afternoon. Fever showed no disposition to yield at all, and quinine was gradually increased until sixty grains per diem were reached. Patient complained of very little deafness until this dose was reached. This was the eighteenth day of the treatment, and the twenty-first of her sickness. This dose was given for two days, with the effect of bringing the highest temperature marking down to 101.5°. Antipyrine was discontinued on the sixteenth day. It always produced a profuse perspiration, and seemed to depress the heart so much that I was afraid to use it any longer. After exhibiting sixty grains of quinine for two

days, the dose was reduced five grains a day until twenty-five grains were reached. After the middle of the fourth week temperature never went above 100°, but did not remain at the normal until the end of the sixth week. When quinine was resumed in this case, it did not produce the nervous excitement that it caused at first, even when one drachm daily was given.

In Case I. it might be objected that it was quite a mild attack, and the arsenic would have done just as well without the antipyrine. Probably it would, but if ever I have to treat a severe attack of intermittent in this patient, I shall have great confidence that I can keep his temperature under control with antipyrine until the arsenic shall have eradicated the malaria.

In Case III. the action of the antipyrine, in bringing the temperature to normal so promptly, was wonderful. Can we explain it by supposing that the quinine administered had already destroyed the malarial poison, but that the heat centre in the medulla remained so perturbed that the temperature did not decline until there was direct action upon this centre by the antipyrine? This may have been a coincidence, but the result was certainly most gratifying. I was strongly impressed that this case was about to assume a pernicious character, from the condition of the conjunctivæ and the delirium.

Case IV. is reported because in this instance the combined action of antipyrine and arsenic was not gratifying. The nervous symptoms quickly disappeared, although the fever did not subside, but rose again in a very intense form. Hence, it is important to recognize that this is not a specific treatment. But from these cases and a number of others in which I have used antipyrine and arsenic—when quinine either could not be used at all, or when it was best to suspend its use for a few days—I am convinced that the combined use of these two drugs meets a want that has long been felt by those who have much malaria to treat.

I have never seen any rash caused by antipyrine. Occasionally its administration is followed by nausea. I usually exhibit it in solution in ice-cold water. Given in this way the bitter taste is very transient. If ice water is not convenient it is best to give the drug in capsules.

It should not be forgotten that apart from the causes that may induce it, fever may be a source of great danger in and of itself. This is especially true of the hyperpyrexia of malarial fevers. The physician who has ever seen an ordinary case of intermittent or remittent suddenly take on the pernicious type, has a wholesome dread of this catastrophe. It is to be hoped that some one will soon try the virtue of antipyrine in a pernicious case, and report the result.

In children the effects of antipyrine in reducing malarial pyrexia are even more happy than in adults. Restlessness and tendency to convulsions caused by the fever are quickly replaced by quiet repose and slumber. So striking is the change that the physician is liable to be misled and think it permanent, but as soon as the effects of the antipyrine wear off, unless the cause has been removed the same threatening symptoms reappear.

Inasmuch as we do not yet know definitely what malaria is, it is impossible to explain the action of these remedies in the treatment. Fothergill says of arsenic, "it is a powerful alternative; it procures more perfect elimination of waste, and so more perfect nutrition of the body." (*Handbook of Treatment*, page 76.) This is about as definite an explanation as has been attempted.

It is possible that antipyrine, in addition to its well-known apyretic effects, has an action in malarial pyrexia that is especially indicated. Dr. Beyer (*American Journal of the Medical Sciences*, April, 1886, page 397), quoting Bettelheim, says "that the reduction in temperature, following the administration of antipyrine, is due to its causing a dilatation of the peripheral vessels and a contraction of the vessels of the viscera." In malarial fevers the congestion of the viscera is an important factor to be considered.

"No intelligent practitioner can watch a patient during the cold stage of a malarial paroxysm without realizing how important the attendant congestion is as a pathological state. . . . The blood driven from the surface and extremities must be accounted for elsewhere, and the amount of blood which is lost from one part of the circulatory tree, must correspond with that accumulated elsewhere." (*Pepper's System of Medicine*, vol. i. page 605.)

This is preëminently the condition in the cold stage of intermittents, but exists, although in a less degree, in the continuous fever of remittents, as evidenced by the usual symptoms of portal congestion, congestion of the kidneys, or enlargement of spleen. Hence antipyrine fulfils an important indication outside of its specific influence on temperature. Dr. Beyer (*op. cit.*) sums up his own conclusions on the physiological influence of antipyrine in this sentence: Antipyrine, though largely dilating the veins, increases the power of contraction of both auricles and ventricles, and has no injurious influence upon the blood nor the muscular tissues, and, therefore, possesses all the good qualities of a perfect antipyretic.

Unfortunately my own clinical observations do not bear out this high testimonial of Dr. Beyer, that it increases cardiac impulse. There is generally some reduction in the frequency of the pulse corresponding to the reduction in temperature, but the former is by no means always proportionate. When the profuse perspirations caused by antipyrine come on in a case where vitality is already depressed, there may be alarming weakness of the heart. A case in point can be found reported by Dr. W. M. Welch, in *THE MEDICAL NEWS*, January 2, 1886. While I think these cases will be found the exception in treating malarial fevers, they must not be forgotten.

HOSPITAL NOTES.

THE TREATMENT OF
RHEUMATISM IN THE NEW YORK HOSPITALS.

NEW YORK HOSPITAL.

DR. GEORGE L. PEABODY treats his cases of acute rheumatism with a combination of salicylic acid and

iron, the formula for which was obtained in the following way:

About a year ago a nurse was pouring into a common receptacle some remnants of different medicines, when she noticed that a black precipitate formed by iron was turned into a transparent solution of a rich red hue as soon as she poured in the fluid contents of another bottle. Being a young woman of an inquiring turn of mind, she asked the house-physician the cause of this phenomenon. The house-staff, to help her in her desire for information, experimented with the drugs that she had been throwing out, and ascertained that her manipulation of chemicals had been this: She had first poured into the receptacle a solution containing salicylic acid. Into this she had poured a solution of iron, with the result of producing a black precipitate. To this she had added some sodium phosphate, with the result of producing a clear red solution.

This at once gave a clew to the means of combining iron and salicylic acid without forming a precipitate. The facts were submitted to the apothecary of the hospital, and from them he produced the following formula, which has been in constant use for nearly a year:

R.—Acidi salicylici	gr. xx.
Ferri pyrophosphatis	gr. v.
Sodii phosphatis	gr. l.
Aquæ	℥ss.

This method of giving this drug in rheumatism has now been fairly tested. It may be said to agree as well with the stomach as any other, and it has the great advantage of not being followed, even if its use be long continued, by the severe anæmia that so often follows the use of salicylic acid, if it be given without iron.

The dose which is described in this formula is given every two hours until improvement justifies a diminution in the frequency, or until constitutional effects are pronounced.

Dr. Peabody has tried antipyrin in several cases of subacute rheumatism without satisfactory results; but has had too little experience with it thus far in acute rheumatism, for the cure of which it has such high celebrity in Germany, to speak from personal knowledge in regard to it.

There is nothing, beyond these trifling details, at all peculiar or out of the common way in the treatment of acute rheumatism at the New York Hospital.

BELLEVUE HOSPITAL.

DR. A. L. LOOMIS recognizes in the treatment of acute articular rheumatism two classes of patients, the anæmic and the non-anæmic or robust. This distinction is made with great care, and, in cases of doubt, patients are usually treated as belonging to the first class.

The treatment employed with the robust patients is as follows: Salicylate of sodium in thirty-grain doses is given every two or three hours, according to the severity of the symptoms, until its effects are marked by decided ringing in the ears. The intervals between the doses are then increased to four or six hours, and its use is continued until the acute symptoms have subsided, and the articular inflammation is quiescent. When the salicylate is decreased, the administration of the sodium bicarbonate is begun, in doses of twenty to thirty grains every four hours. It is rapidly pressed until the urine gives a

decided alkaline reaction with litmus paper. Every passage of urine is tested, and the soda is used throughout the acute course of the disease in quantities sufficient to maintain its alkalinity. In the earlier stages, and later if necessary, the pain is controlled by hypodermatics of morphia, and the bowels are kept freely moving by the use of Rochelle salts. The affected joints are wrapped in cotton sufficient to maintain a uniform temperature. The body is clothed in flannel, and great care is exercised to avoid exposure—examinations of the heart being avoided so far as possible. As soon as the temperature reaches normal, or nearly so, the patient is put upon iron and cod-liver oil. If fever runs very high it is controlled by aconite.

In the anæmic cases the salicylate is not given at all. The use of the alkalies is begun at once, and the amount graduated by the same test of the urine. Tincture of aconite in the liquor ammoniæ acetatis is used both to control the fever and as an anti-rheumatic, but its use is discontinued when the acute symptoms have subsided. In these cases cod-liver oil and iron are given in large doses from the very first, and continued for some time after recovery seems complete. *Tr. opii deodorata* is used for pain in these weaker cases, and the joints are protected as before; even more care is given to protecting the patient and avoiding exposure.

In all cases patients are put upon a milk diet throughout the entire course of the disease.

Oleum gaultheriæ has been used in a few cases, with marked success in some. It often relieves the distressing symptoms with surprising rapidity, but it is uncertain in its results, and its use has been attended at times with severe delirium and alarming symptoms of poisoning. It is seldom employed now.

Although salicylic acid is used in robust cases, its effects are believed to be such as favor cardiac complications.

ST. LUKE'S HOSPITAL.

DURING the past six years several methods of treatment of acute articular rheumatism have been carried out under Dr. KINNICUTT's personal observation in the wards of St. Luke's Hospital, and the effects carefully observed. Dr. Dechilly's and Dr. Herbert Davies's methods of encircling the limbs just above the affected joints with blisters have afforded more or less relief of the articular pain, much less prompt, however, than that obtained by the use of the salicyl compounds; the duration of the disease, and the implication of the peri- and endocardium, have not been apparently affected. Dr. Harkin's suggestion of applying large blisters over the præcordial region alone, has given wholly negative results, and the substitution of other treatment has invariably been rendered necessary.

In the winter of 1882, Dr. Kinnicutt introduced the treatment of acute articular rheumatism by the oil of wintergreen, a methyl ether of salicylic acid. The mode of administration consisted in giving the oil in fifteen or twenty minim doses in sealed capsules, or floated on water or milk, at intervals of two hours, to the extent of two and a half to three drachms in the twenty-four hours. The initial dosage was maintained during the first week of the disease, and then, in the absence of arthritic pains and fever, gradually diminished until the daily amount was reduced to one drachm, which was

continued throughout convalescence. With the establishment of convalescence, some one of the various preparations of iron invariably was combined with the above treatment, and during this period exposure, exercise, and dietetic errors were carefully guarded against. For the joint stiffness, which frequently persists after the disappearance of pain, the salicylate of lithium, to the amount of forty to sixty grains daily, in divided doses, was not infrequently found to give greater relief than was attainable by a continuance of the oil of wintergreen. The results obtained by this method of treatment were sufficiently favorable to warrant its continued use since that date. The average stay in the hospital, in a number of cases thus treated during the winter and spring of 1882, was twenty-four and one-third days, which average has since been closely maintained.

On account of the rapid elimination of the various salicyl compounds, their effects are of comparatively limited duration. The maximum benefit obtainable from their use in acute rheumatism will therefore be found, he is convinced, in conforming the doses to the rate of elimination, in so far as is possible.

The only other method of treatment which has been used in Dr. Kinnicutt's wards is the combination of alkalies with a salicyl compound. The rule has been to give indifferently the oil of wintergreen, salicylic acid, or its sodium salt, in one-half the customary daily amount, combined with four drachms of the sodium bicarbonate, or the potassium citrate in the twenty-four hours. Their use has been continued, in diminished doses, throughout convalescence. The mixed treatment has been found equally efficient with that of the salicyl compounds alone, in controlling the arthritic symptoms and the fever. Believing that the use of the salicyl compounds, when begun at the onset of acute articular rheumatism, affords a limited protection to the heart, a larger number of cases than are yet at his disposal are necessary to permit an expression of opinion in regard to a greater efficiency of the *mixed* treatment in averting cardiac complications.

DR. BEVERLEY ROBINSON treats the cases of rheumatism which come into his hands as follows: If the bowels are not freely open, the patient is first given a mild mercurial purge, such as calomel gr. x, with sod. bicarb. gr. x. After this has operated, if the disease is acute, ol. gaultheriæ gtt. xv, q. 2 h., ten doses daily, is prescribed; the diet is usually restricted to milk and farinaceous food. If necessary, a small dose of morphine is given to relieve the pain.

If the patient has been suffering for some weeks before coming under observation, and the disease has become subacute, sodii salicylat. gr. xx, s. q. 6 h., is prescribed; and if anæmia also exist, iron is given. In these cases the diet is usually not restricted.

In chronic cases, especially those in which only one joint is affected, and the disease is not of gonorrhœal origin, the salicylate of lithium, in doses of gr. x-xv, repeated three times daily, together with tonics, and a nourishing diet, seems to give the best results. Many chronic cases are also benefited by fixing the joint for several weeks by means of plaster bandages, and after these have been removed, by daily applications of faradism to the joint. In all cases where there has been much

thickening of the parts in and about the joint, repeated blisters have been found of great service.

In the cases of gonorrhœal rheumatism which have been under his observation, quinine and potassium iodide, with tonics, have yielded good results. The local treatment of the affected parts was the same as described above—*i. e.*, fixation and, later, faradization.

INGENIOUS METHOD OF EXTRACTING A COCKLE-BUR FROM THE LARYNX.

DR. D. B. CRAWLEY, of King, Mississippi, writes us that recently a negro boy, aged nine, was brought to him with a cockle-bur lodged in his larynx. His voice was almost gone, and respiration was much interfered with. With his finger introduced well down the throat, Dr. Crawley could feel the bur. Having no instruments at hand, he wrapped some cotton around the end of his right index finger, which he then passed down to the bur, and by a rotary motion he sought to entangle in the cotton the prickles of the bur, and thus withdraw it. After several attempts he succeeded in extracting the bur by this ingenious method.

MEDICAL PROGRESS.

THERAPEUTIC USES OF THE HOT BATH.—DR. W. J. NOTLEY writes as follows in the *Lancet* of Nov. 13, 1886:

Some time ago an opportunity was afforded me of making some observations on the effect of the hot bath in removing some morbid conditions of the system. A man of middle life, in temperament nervous-sanguine, spare, and somewhat below the average height and weight, complained of languor, debility, want of energy, and lowness of spirits. On examination it was found that his heart and arteries were sound, though his circulation was rather weak. His alimentary system was fairly good, though the quantity of food taken was below the average. His skin was somewhat dry, and a few spots of psoriasis were found on the extensor aspects of the legs, arms, and trunk. His urine was clouded with phosphates, and below the average in quantity. As the Turkish bath was not in this case available, he was advised to take a water bath at a temperature of 105° F., and directions were given him how to proceed in case of faintness. The day after taking the bath, his condition was wonderfully improved. His circulation was stronger, his urine was clear, and he now felt cheerful and well. This improved state of matters continued for about twelve days, when all the unpleasant symptoms reappeared, and he began to feel as ill and dejected as ever. The most natural proceeding was, of course, to order him another bath, and this he took with the same happy result as before. Since that time he has had the hot bath about once a fortnight, and by this means has managed to keep himself in very tolerable health and spirits.

It would be interesting to know the exact means by which the hot bath produces this powerful and beneficial effect on the system. It must, in the first place, be carefully borne in mind that the warm bath at a temperature below 100° F. has no influence that can be compared with the results to be obtained from the hot bath. The hot bath stimulates the whole system, and the effect of this stimulation appears to last for some

time, for the patient above referred to remained well for about a fortnight after taking the bath. Having ascertained that his diet was as nearly uniform as possible, the quantity of urea excreted on three successive days immediately before and after the bath was estimated by Russell and West's method, with the following result:

Average quantity of urine in 24 hours for 3 days <i>before</i> the bath	916.67 c.c.
Average weight of urea in 24 hours for 3 days <i>before</i> the bath	22.8 grms.
Average quantity of urine in 24 hours for 3 days <i>after</i> the bath	1040 c.c.
Average weight of urea in 24 hours for 3 days <i>after</i> the bath	26.25 grms.

From this it appears that the quantity of urine and the weight of urea excreted were below what are usually stated to be the averages for a healthy man, but that both were very perceptibly increased by the hot bath. If we may assume that the other secretions and excretions were proportionately increased, then we have clear evidence as to the proximate cause of the improvement brought about in the general condition of the body.

As in most other remedies, so in the case of the hot bath, the time and manner of application are of some importance. Like all other baths, the hot bath should be taken before the principal meal of the day, and if this meal be taken early, the good results will be more certain than if it be taken late. The duration of the bath should be about fifteen minutes, and the temperature should be about 105° F. If faintness should come on while in the bath, the whole head should be immersed in the hot water, and kept there for a few seconds, when the faintness will disappear. The usual directions given in public baths are to get out of the bath as soon as drowsiness or faintness begins, and to ring for the attendant; but anyone who attempts to do this will most certainly aggravate his danger. As pointed out some time ago by Mr. Benham, and subsequently by myself, the application of heat to the head is a most potent means of averting syncope. From time to time we hear of deaths in the warm bath; and I am convinced that many of these might have been prevented by the adoption of the simple method referred to, instead of the deadly and often impossible means commonly recommended.

CHROMATIC ASYMMETRY OF THE IRIS A SYMPTOM OF NEUROSIS.—CH. FÉRÉ classifies eyes as brown, blue, green, and gray; in the first can be distinguished red, orange, and yellow; in the second blue and indigo; in the third no pure color, but portions which appear bluish; the fourth are not a mixture of black and white, but often blue, violet, and green, the gray eye is that in which the color is undecided.

Varieties of color are due to varied refraction of light caused by different dispositions of the anatomical elements of the retina, and not by a particular pigment.

Varieties of tone are very numerous; they are three in each color, dark, intermediate, and light. They are probably dependent upon refraction, some have thought them caused by the varying thickness of iris pigment.

The iris presents three concentric zones for observation—external, middle, internal; of which the middle is generally light, the inner dark; the degree of dilatation

of the pupil affects the color of the iris; it follows that eyes should be observed equally well dilated and from the same distance.

In addition to changes in eye colors caused by light, age, and race, there are differences which are symptoms of pathological conditions. The examination of 600 subjects, healthy, insane, idiotic, epileptic, and hysterical, showed that those diseased possessed a larger proportion of light eyes than the healthy; this was especially evident with the hysterical.

Asymmetry of color, when not dependent on morbid local conditions, is very rare; in over 600 subjects only seven were found in which such asymmetry was present, and these patients were imbecile, hysterical, or epileptic.

Asymmetry of tone is not rare, especially among the neurotic; in 75 cases in 100 of facial hemiatrophy or hemiparesis, with or without epilepsy, the iris of the side affected was darker in tone than the other.

In epileptics 26.7 per cent. had this symptom, 62 out of 76 hysterical patients; in choreic patients, those with obstinate facial neuralgia and with sciatica, chromatic asymmetry was observed.

Chromatic asymmetry the author considers a valuable symptom in neurosis tending to become unilateral; with deviation of the pupil it points to congenital lesion.

Chromatic asymmetry, when present with unequal pupils, may aid in diagnosing hysteria and asymmetric degenerations from locomotor ataxia and general paralysis.

When observed in the children of the hysterical it is a sign of neurotic tendencies, calling for prophylactic treatment.—*Le Progrès Médical*, September 25, 1886.

STYPTIC PAPER, much used abroad, though but little known here, is a new modification of medicated organic matter. It is made by mixing with the paper pulp (during the process of manufacture of this material) some solution of ferric chloride, and carefully drying the product, or, in place of the iron solution, another variety is made with tannic acid. The proportions needed are about one part of iron solution to an equivalent of pulp that will yield four parts of dry product, or, if tannic acid be used, one part of the acid to make eight parts of finished product. When made on the small scale, white absorbent (or blotting) paper may be used and made into a pulp, to which the astringents are added, and then carefully dried. It forms an excellent means of stopping bleeding by simply binding on a small quantity of the prepared paper.—*Pharmaceutical Record*.

CITRATE OF IRON HYPODERMATICALLY.—In anæmia occurring during pregnancy, caused by metrorrhagia, and from other causes, CHIARA found that ten centigrammes of ferric citrate in one gramme of water might, with advantage, be injected deeply, twice daily, in the gluteal region in cases where the stomach had refused to tolerate iron.

Microscopic examination of the blood showed the red corpuscles greatly increased, and rapid cures followed.—*L'Abeille Médicale*, October 11, 1886.

HORSEFLESH AND OTHER MEATS AS PUBLIC FOOD.—Experiments made by DECROIX have shown that horseflesh is a wholesome and available food; that in time

of need the flesh of animals perishing from non-infectious causes may be safely eaten; that, of course, infectious disease makes flesh unfit for food, while the author thinks medicaments have no bad influence. The author thinks that a single meal of the flesh of animals which died of glanders or rabies (as would happen accidentally) would be without injury; the efficient means of destroying most poison is thorough cooking. The author's conclusions are based on the observation of the extensive use of horseflesh in France, and on thorough experiments with diseased meats on the human subject.—*Fortschritte der Medicin*, November 1, 1886.

HEBRA'S LOTION FOR ECZEMA.—

Phenic acid	4 parts.
Glycerine	15 "
Sulphuric ether	15 "
Alcohol	90 "

A mixture to be applied to dry and scaly eczema occurring in plaques, and which gives good results in obstinate cases. Tincture of iodine, applied with a brush, often gives equally good results.—*L'Union Médicale*, November 6, 1886.

SYPHILITIC ALBUMINURIA.—HORTELOUP, in an extended article, reaches the following conclusions:

1. Syphilis, in the first months of its appearance, can occasion albuminuria, which is easily curable by antisyphilitic treatment, and leaves no trace.

2. This albuminuria must be distinguished from that which occurs in the second and third years of syphilis, whose prognosis is very grave, for it may be considered the point of departure for chronic nephritis, generally recognized long afterward.

3. A person having syphilis, from the depression the disease always produces, becomes more susceptible to cold, and more predisposed to nephritis resulting from cold.—*Annales de Dermatologie et de Syphiligraphie*, October 25, 1886.

INTRAPULMONARY INJECTIONS.—At the meeting of the Manchester Medical Society on Nov. 3, 1886, DR. A. RANSOME gave the details of one case of gangrene of the lung, and four of phthisis, in which iodoform dissolved in ether, in olive oil, or in oil of eucalyptus, had been employed, the latter vehicle being preferred. The case of gangrene of the lungs was restored to health, the treatment having been very thoroughly carried out. In the phthisical cases, only from two to eight injections had been used in each case, and temporary benefit was obtained in two of them. In one of the others, symptoms of iodoform poisoning had followed an injection, and, in the remaining case, temporary pneumothorax was produced. Hemorrhage from the lung followed one of the injections, in the case of gangrene, but without any bad results.

TESTS FOR SUGAR.—PENZOLDT describes the two following reactions which are applicable to cane-sugar, to glucose, milk sugar, levulose, maltose, carbohydrates, and to glucosides which yield glucose when treated by sulphuric acid. These tests are applicable neither to inosite, mannite, or quercite.

Treat one-half to two cubic centimetres of the suspected liquid with two drops of an alcoholic solution 15

to 20 to 100 parts alpha naphthol and shake the mixture. A slight cloudiness will result owing to the precipitation of a small quantity of naphthol; add double the volume of sulphuric acid and shake well. If sugar be present an intense violet color appears; on adding water a violet-bluish precipitate appears; this precipitate, soluble in alcohol and ether, colors these solvents yellow, caustic potash dissolves the yellow color.

This test must be made exactly as described; it shows a very minute trace of sugar, and the reaction never results except with sugar, vanilline, anethol, salicylate of methyl, and some other similar products. Substances other than sugar are colored by sulphuric acid alone, while the violet precipitate which results from the dilution of the liquid with water differs entirely from that which results in liquids containing sugar.

If the alpha naphthol in the preceding test be replaced by a solution of thymol of similar strength, the performance of the test remaining the same, a dark red color becoming crimson and carmine results.

The dilution of the liquid gives a carmine tint, a flocculent precipitate is deposited after a little which colors alcohol, ether, and caustic potash a pale yellow as it dissolves, and with ammonia gives a clear yellow. This test is as delicate as that with naphthol.

The urine of healthy persons diluted from 100 to 200 times reacts with this test, but not in greater dilution.

Urea, creatine xanthine, uric acid, allantoin, hippuric acid, succinic acid, phenol, pyrocatechine, and indican do not respond to these tests.—*Annales des Maladies des Organes Génito-Urinaires*, October, 1886.

A NOVEL TREATMENT OF PHTHISIS.—DR. BERGEON, of Lyons, recommends a method of treating phthisis which has, at any rate, the merit of novelty. His plan is to utilize the effects of sulphuretted hydrogen, and this he proposes to do by injecting carbonic acid gas, saturated with sulphuretted hydrogen, into the intestines. If care be taken to secure the absence of atmospheric air, no inconvenience, it is said, results from the injection even of large quantities of the mixture; absorption into the venous system and elimination by the lungs taking place very rapidly. It is claimed for this procedure that, by its means, the use of sulphuretted hydrogen is unattended with any toxic effects, and exerts its influence directly on the lungs themselves. It has been employed in a number of cases at the hospitals of Lyons, Bordeaux, and Paris with great benefit to the patients, even in very advanced cases, and, latterly, similar observations have been made in the consumption hospitals of London, the results of which have not yet been made known. The method has been very much simplified by the introduction of an ingenious but simple apparatus whereby the carbonic acid gas is generated, and saturated with sulphuretted hydrogen, ready for use.—*Brit. Med. Journ.*, November 27, 1886.

MOLLIN is the name of a potassium soap described by KIRSTEN, containing a large proportion of fat and glycerine. It is very bland, and takes its name from *sapo mollis*. Combined with equal parts of ung. hydragryrum, it is easily and quickly used for inunction. In combination with styrax it is useful in scabies, and is useful as a vehicle for many drugs.—*Centralblatt für die gesammte Therapie*, November, 1886.

THE MEDICAL NEWS.

A WEEKLY JOURNAL
OF MEDICAL SCIENCE.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will be liberally paid for upon publication. When necessary to elucidate the text, illustrations will be furnished without cost to the author. Editor's Address, No. 1004 Walnut St., Philadelphia.

SUBSCRIPTION PRICE, INCLUDING POSTAGE,

PER ANNUM, IN ADVANCE, \$5.00.

SINGLE COPIES, 10 CENTS.

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made, at the risk of the publishers, by forwarding in registered letters.

Address, LEA BROTHERS & CO.,
Nos. 706 & 708 Sansom Street,
PHILADELPHIA.

SATURDAY, DECEMBER 11, 1886.

THE TREATMENT OF PNEUMONIA.

In this country pneumonia is unquestionably the most serious and the most fatal of the acute diseases. In mortality tables it follows consumption, and causes a larger number of deaths than any one of the eruptive fevers. The statistics of the disease have been elaborately studied, and as Dickson observes, the most remarkable fact they show is "the wonderful equality of proportional mortality—in peace and all comfort; in hospitals of wealthy communities; in the field of destructive war, and in hospitals and barracks, the emphatic seats of destitution, privation, exposure, and neglect." The rate of mortality in the large general hospitals of this country is rarely below—more often above—twenty-five per cent., which represents about the average death-rate from this disease in the Northern and Southern armies during the civil war. In this country extensive statistics of pneumonia in private practice are not available; but in the recent returns of the Collective Investigation Committee of the British Medical Association the mortality was eighteen per cent. We have referred to these figures as indicating the terribly destructive character of this disease, and they may serve to correct an impression which still seems to prevail in some quarters that it is not a very fatal malady.

The treatment of pneumonia has always been influenced by the prevalent notions regarding its pathology, and we are now in an interesting period of transition. So long as the disease was regarded as a local inflammation, antiphlogistic measures were in vogue, of which bleeding and antimony were the most important. The courageous experiments of Skoda and Deitl, in Vienna, and of Ben-

nett, in Edinburgh, taught us the natural history of the disease, and laid the foundation of an expectant, or, better, a rational method of treatment which does not profess to control the course of the malady, but meets indications as they arise and combats the tendencies to death. Of late, the opinion has gained ground that pneumonia is an acute specific fever dependent upon a microörganism, and various antiseptic plans of treatment have been suggested.

We propose to call attention to one or two practical points about which there is a wide difference of opinion among practitioners in this country. There is a tendency at present to revive venesection, and it is important to understand clearly the indications for its practice. Unquestionably prompt and free bleeding is called for in threatened death from asphyxia when the right heart is distended, cyanosis marked, and the pulse becoming small and rapid. The timely abstraction of sixteen to twenty ounces of blood will sometimes save life, though we must confess to some disappointment in the results, for, of five such cases observed, only one recovered. The practice of free bleeding at the onset, which is still employed by some practitioners, is not to be commended, except in rare cases.

In spite of the fact that the leading text-books on practice in this country, and many of the prominent teachers discourage the use of arterial sedatives in pneumonia, they are still most extensively employed. It is true that tartar emetic has lost favor, but aconite and veratrum viride are still favorite remedies, and there are practitioners who claim wonderful results from their use. We have never been able to satisfy ourselves that they have the slightest influence upon the duration of the disease, and, on the other hand, they tend to depress the heart, and may thus be directly injurious if continued for many days. The calomel treatment has been revived of late, but the careful reports from Botkin's clinic, in St. Petersburg, do not indicate that it has any value in controlling the severity of the disease.

Opium in the form of Dover's powder is a most valuable remedy in the early stage of the disease, and was much used in Edinburgh some years ago. It is contra-indicated if there is any tendency to accumulation in the bronchial tubes, but in the painful onset it is often of signal service in allaying the pain and restlessness. We doubt if it has had a sufficient trial in the hands of practitioners.

While many cases of pneumonia do well if carefully nursed and fed, there arise in others two indications demanding the most judicious treatment, viz., high fever and heart failure. So long as the temperature does not rise above 103°, the use of antipyretics is not necessary; but, with a temperature above this, quinine should be given in from twenty to twenty-five grain doses. Antipyrin is not so suit-

able, as it is decidedly more depressing than the quinine, and the same objection holds with thallin and kairin. Repeated cold sponging is a useful adjunct, and in the combination of high temperature with delirium and great restlessness the cold pack is indicated. In the heart failure of which so many pneumonic patients die there is as yet no substitute for alcohol, which, as in typhoid fever, is well borne. Camphor, as a cardiac stimulant, has valuable uses.

The antiseptic treatment of the acute specific fevers is not in a satisfactory state, and has not yet got beyond the tentative stage. Benzoate of soda, phenic acid, iodine, and salicylate of soda, have all been recommended. We have already referred (*THE MEDICAL NEWS*, January 9, 1886) to the good results obtained by Lepine, who injects antiseptic solutions into the hepatized lung. He has again brought the subject to the attention of the profession, and recommends as an injecting solution a mixture of corrosive sublimate, 1 : 5000–50,000; salicylic acid and carbolic acid, 1 : 1000; hydrobromate of quinine and chloroform, 1 : 2000; and bromine, 1 : 10,000. The data are not yet available for a judgment upon this method.

A study of the history of the treatment of pneumonia makes one almost despair of the future of therapeutics, so impossible does it seem to arrive at reliable conclusions regarding the use of medicines. And yet our feelings of despair vanish when we compare the figures of to-day, bad as they appear, with those of the first quarter of this century; for we then see that there has been in the treatment of pneumonia, as in that of fevers, a steady, progressive enlightenment. The heavy mortality is due largely to the fact that pneumonia attacks with special avidity the aged, the weak, and the dissipated. A study of a large number of autopsies in this disease will show a considerable percentage of persons with serious visceral lesions, particularly of the kidneys, and these circumstances we must take into account in estimating the value of treatment. This disease in drunkards swells enormously the bill of mortality in the city hospitals, while in private life it is in this climate the acute affection to which the aged succumb in large numbers.

A NEW INDICATION FOR LAPAROTOMY

SCHULTZE, in a recent number of the *Deutsche medicinische Wochenschrift*, records a remarkable laparotomy done by himself for the purpose of removing the body of a uterus that was septically infected by the decomposition of a retained placenta. The woman, who had a uterus bicornis, had been delivered, without difficulty, of a fetus at the seventh month of pregnancy, but the placenta was retained within the right division of the uterus; after several attempts on the part of a midwife to extract the

placenta, which only resulted in the detachment of the cord, a physician was summoned, who likewise failed to empty the uterus; the patient was then taken to the hospital in Jena, where for five days repeated attempts to remove the placenta were unsuccessful. As by this time the woman had a high temperature, associated with chills and a fetid discharge from the vagina, it was determined to perform laparotomy in order to remove the source of infection, with the hope of averting a general septicaemia which otherwise seemed inevitable. The abdomen was accordingly opened, the body of the uterus was amputated, and the cervical stump fastened in the abdominal wound; the temperature fell immediately, and the woman made a good recovery.

As Schultze himself remarks, the field for this operation must be a very limited one, for the conditions that would justify its performance would be the existence of the source of infection in the uterus alone, the impossibility of removing it *per vias naturales*, and the certainty that no infecting thrombi or emboli were producing metastatic abscesses in other parts of the body—a combination of circumstances that would not often be found.

The reason assigned by Schultze for not removing the decomposing placenta by the natural passage in his case was the tightly constricted internal os, which prevented ready access to the cavity of the uterus on the right side; but no mention is made of an attempt to overcome this constriction by instrumental means, as, for instance, by bougies of gradually increasing size, in order to endeavor to strip the placenta from its attachment with the aid of a curette—a procedure, one would think, that should have been at least attempted before subjecting the woman to the danger of an abdominal section, and leaving her ever afterward in a mutilated condition.

SURGICAL MYXEDEMA.

TOTAL ablation of the thyroid gland is liable to be followed by a remarkable constitutional affection called surgical, or operative, myxœdema, in contradistinction to the disease of the same nature which occurs spontaneously. The surgeons in certain of the Swiss cantons, in which bronchocele is endemic have had a large experience with this remarkable condition, and some months ago we referred to the conclusions of Kocher as well as to the artificial production of the disease in monkeys by Horsley.

At the recent Surgical Congress at Paris, Reverdin, of Geneva, presented a paper on the identity of the operative and spontaneous myxœdema. The earliest and most important of the symptoms of operative myxœdema is swelling of the face, hands, and neck; not the puffy œdema of dropsy, but a firmer, more solid exudation. The tactile sensation

is slow, the special senses are dulled, and there are often unpleasant subjective sensations, particularly that of cold. The skin becomes dry and scaly, and the hair often falls; speech becomes slow and there is loss of memory. With these there are no visceral symptoms, though occasionally the urine is albuminous. In children from whom the gland has been removed, a condition of cretinism may be induced and there may be such an arrest of the physical and mental development that the child becomes an idiot. Bourneville and Bricon have observed myxœdema in idiotic children, and have determined the absence of the thyroid gland in these cases.

It is well to know that this condition does not invariably follow removal of the gland. Thus, of Kocher's thirty cases twenty-four became myxœdematous; of Reverdin's eleven, only five; on the other hand, Billroth, in a large number of operations, has not had a case, and Bottini has been equally fortunate. It would certainly seem as if in Switzerland, where goitre is endemic in certain regions, there are other conditions which render the patients more liable to this unfortunate event. The extirpation need not be total; Reverdin has seen a mild grade of the disease follow removal of only one lobe. There are many different grades of the affection and the milder forms are capable of amelioration and occasionally of cure.

THE ENUCLEATION OF NODULES OF STRUMA.

SINCE the publication of Kocher's observations on "Cachexia Strumipriva," or operative myxœdema, following the total excision of the thyroid body for neoplasms, surgeons have reached the conclusion that the operation should only be practised for malignant growths; and they have resorted to various methods of operating in ordinary cases with the view of obviating the condition first described by Kocher, and amply verified by other surgeons.

Among these modifications the most recent is that of Socin, of Basle, described by his assistant, GARRE, in the *Centralblatt für Chirurgie*, No. 45, 1886. It consists in the intraglandular enucleation of the degenerated portions of the thyroid body, which portions, in the great majority of cases, exist as circumscribed nodules separated from the functionally active tissue by more or less thick capsules. If the nodules are superficial the surrounding layer of sound glandular tissue is very thin; should they, on the other hand, be embedded deeply, the overlying tissue varies in thickness from one-fifth to four-fifths of an inch.

In either event the translucent, bluish, slightly vascular capsule having been reached, it is opened, and the tubers enucleated with the finger, a periosteotome, or any other suitable instrument. The hemorrhage is venous and not abundant, although

profuse bleeding may occur in cutting through thick layers of the gland to reach the nodules, unless hemostatic forceps be first applied. The walls of the cavities are closed by catgut ligatures, spaces being left for drainage tubes, and the external wound is united and dressed on ordinary antiseptic principles.

The procedure, thus briefly described, has been resorted to in about fifty cases, with the best results. It is easily practised; unattended with danger; large vessels, as well as the recurrent laryngeal and other nerves, are secure from injury; and it has never been followed by surgical myxœdema. For these reasons, the operation deserves an extended trial.

LOCAL APPLICATIONS IN VAGINITIS.

SLOCUM has recently, in *THE MEDICAL NEWS*, called attention to a communication upon the use of vaginal tampons of absorbent cotton "coated with boric acid" in the treatment of profuse and offensive leucorrhœa, a method which he prefers to the use of boroglyceride cotton tampons, because the glycerine causes a copious watery discharge which, though at times beneficial, is not always desirable. At the Jefferson Medical College Hospital boric acid has been used in the treatment of vaginitis with very satisfactory results. A large cylindrical tampon with a string attached to it, is covered with glycerine and then thoroughly coated with boric acid sprinkled from an ordinary pepper-box. It is allowed to remain in the vagina for forty-eight hours.

Delineau, in the *Revue Médico-Chirurgicale des Maladies des Femmes* for October, advises, in vaginitis, the use of a powder composed of salicylic acid three parts, powder of poplar charcoal five parts, and powdered talc ten parts, applied by an insufflator to the entire vaginal surface.

We find in the same number of the *Revue* the following method of preparing salicylated cotton, which may also be used not only for uterine, but also for vaginal application. One hundred parts each of concentrated alcohol and of purified cotton, ten of salicylic acid, and one of glycerine are provided. The salicylic acid is dissolved in the alcohol, the glycerine added, and then the cotton is saturated in the mixture, the superfluous fluid squeezed out, and the cotton dried and kept in hermetically sealed flasks.

SURGEON-GENERAL MOORE arrived at Washington from San Francisco on Tuesday, and at once assumed the duties of the office of Surgeon-General of the Army, to which he has just been appointed.

DR. N. A. RANDOLPH has been elected Professor of Hygiene in the University of Pennsylvania, to succeed the late Dr. Joseph G. Richardson.

THE arrangements for the Centennial Celebration of the foundation of the College of Physicians of Philadelphia are being rapidly perfected. The ceremonies on January 3d, will include an address, at Association Hall, by the President, Dr. S. Weir Mitchell, followed by a Reception, in the College building, by the President and Fellows. On Tuesday, January 4th, at noon, a Centennial Meeting of the College will be held with appropriate exercises, and in the evening the Fellows will dine together.

It is anticipated that representatives from the leading medical societies of the country will be present and participate in the celebration.

M. COLIN, the eminent professor in the Veterinary School at Alfort, read a paper last week before the Paris Academy of Sciences, showing that the average annual number of deaths from rabies in France is 26, and that since M. Pasteur began his course of treatment the same number of patients has died. According to official statistics the number of persons bitten by mad animals last year in France was 351, while M. Pasteur has treated 1700 patients. M. Colin concludes that the Pasteur system is of doubtful efficacy, and he is alarmed for the results of virulent inoculation.

THE MEDICAL MISSIONARY RECORD is the title of a new medical journal, of which the first seven numbers have appeared. It is edited and published by Dr. George D. Dowkontt, Medical Superintendent of the New York Medical Missionary Society, among the managers of which we notice are Drs. Sabine, Markoe, Roosa, Loomis, and Thomson.

The first number has a list of all the medical missionaries throughout the world, numbering nearly 230. The reading matter is varied, interesting, and valuable, whether from the medical or the missionary aspect.

THE PENNSYLVANIA HOSPITAL FOR THE INSANE has opened a dispensary service for cases of incipient mental disorders, at the out-patient department of the hospital, Ninth and Spruce Streets, which is intended to furnish advice and treatment to this class of cases among the poor. It is the purpose that only cases unable to pay for their medical advice are to be treated at this service.

A NEW *Centralblatt*, devoted to the subject of bacteriology and animal parasites, will shortly appear in Germany, under the editorship of Dr. Oscar Uhlworm, in Cassel. The coöperation of Drs. Baumler, Bollinger, Buchner, Doutrelpont, van Ermingen, von Etlinger, Flügge, Grassi, Heiberg, Hueppe, Kitasato, Klebs, Koch, Miller, Neisser, Oerley, Prazmowski, Watson Cheyne, Weichselbaum, Weigert, and Zopf has been secured.

There is also to be issued in Germany a new quarterly, entitled *Progress in the Chemistry of Food Stuffs and Condiments*, which will be under the editorial management of Hilger, Keyser, König, and Sell.

THE NEW YORK SKIN AND CANCER HOSPITAL, and its country branch at Fordham, Westchester County, N. Y., are now ready for the admission of patients from New York and other States. Applications should be directed to L. D. Bulkley, M.D., 4 East Thirty-seventh Street, New York, Secretary of the Medical Board.

REVIEWS.

A TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE. By AUSTIN FLINT, M.D., late Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Bellevue Hospital Medical College, New York. Sixth edition, revised and largely rewritten by the author, assisted by WILLIAM H. WELCH, M.D., Professor of Pathology in Johns Hopkins University, Baltimore, and AUSTIN FLINT, JR., M.D., Professor of Physiology in the Bellevue Hospital Medical College, New York. 8vo. pp. 1160. Philadelphia: Lea Brothers & Co., 1886.

It was known at the time of Dr. Flint's death that he had, with the coöperation of Prof. Welch, completed the revision and partly rewritten a sixth edition of his *Practice of Medicine*. Dr. Welch and Dr. Flint, Jr., have carried the work through the press. The latter has written an interesting preface which adds not a little to the value of the work, as showing the untiring industry of the author and the care with which he collected materials during an unusually long and active professional life. The work is based, we are told, upon an unbroken series of clinical records begun in 1833, and continued for more than half a century and which embraces sixteen thousand nine hundred and twenty-two folio pages of manuscript written with the author's own hand! Dr. Flint was unquestionably one of the most careful clinical students which this country has produced, and he enjoyed exceptional facilities for the study of the diseases incident to all parts of the United States, as during the half century of professional duties he occupied chairs in Buffalo, Louisville, New Orleans, and New York. One characteristic of Dr. Flint's mind has contributed to make this work of special value. He never strained after that false consistency which makes so many teachers, as age creeps over them, cling all the closer to the views which they may have formed as young men. His mind was unusually receptive and he kept thoroughly abreast with the current medical opinions of the world.

Among the changes in this edition we notice many new articles of great value, such as the following: "Infectious Tumors," "Cerebral Syphilis," "Syphilitic Disease of the Lungs," "Spastic Cerebral Paralysis of Children," "Hereditary Ataxia," "Myxoedema," "Multiple Neuritis," "General Pathology of Fever," and "Milk Sickness." The pathological portions of the entire work have been revised and rewritten by Professor Welch with the greatest care.

No more fitting monument to the author could be desired than this great work, which has contributed more than any other text-book to inculcate in English-speaking physicians sound principles in the practice of medicine.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 2, 1886.

THE PRESIDENT, A. JACOBI, M.D., IN THE CHAIR.

DR. J. BLAKE WHITE presented a

PHTHISICAL LUNG INJECTED WITH CARBOLIZED IODINE.

He said that the results which he had met with during the past year from injections into diseased lungs had greatly excited his enthusiasm. Intra-pulmonary medication theoretically seemed to be a very rational method of treatment, and practically it was found to be of much efficacy. Having referred to the success met with by Drs. Pepper, Robinson, and others, he mentioned a case of his own in which recovery took place, and the course of which was watched by three professional friends. The preparation which he prepared for injections was a mixture of carboloid acid and tincture of iodine, to which was added a small amount of morphia and atropia. In the cases in which he had employed it all the symptoms had been relieved; the cough being controlled, expectoration diminished, the sleep improved, and night-sweats checked.

The specimen presented was the left lung of a patient in whose case three injections were made with the effect of producing marked relief. The case was hopeless, however, as regards cure, at the time the first injection was made, and the patient died six weeks after the administration of the third. Dr. White gave the history of the case in detail.

The patient was a native of Ireland, a male, and forty-six years of age. He was a milkman by occupation. When first seen by Dr. White in his service at Charity Hospital, last summer, he was in the third stage of phthisis, with a large cavity in the upper part of the left lung, which was in a state of active suppuration. There were profuse expectoration, exhausting night-sweats, and all the ordinary symptoms of advanced pulmonary tuberculosis. On the 19th of July, 1886, the first injection of ten minims of carbolized iodine was made in the first intercostal space. It was followed by no reaction, and there was immediate and marked improvement in the patient's condition. The next week a second injection of the same character and quantity was given, and this also, without any reaction whatever, marked improvement in all the symptoms followed. The man felt so much better, indeed, that he was enabled to make an amount of physical exertion that before the treatment would have been impossible.

On the 30th of August a third injection was made, this time twenty-five minims of the carbolized iodine being employed. It was attended by a brief paroxysm of coughing, but no bad results followed, and marked improvement was subsequently noted. Dr. White's term of service at the hospital now expired, and no more injections were made.

The patient died October 19th, and at the autopsy the

left lung was found bound down everywhere by the most extensive pleuritic adhesions. The pericardium was also involved by adhesions to such an extent that it was a wonder to those present how the heart had been enabled to perform its functions for so long a time as it had. Much of the tissue of the left lung presented a cirrhotic appearance, and in the vicinity of the cavity in the apex, a considerable space was found to be tinged by the injections. The upper portions, where the injections had been made, presented a marked contrast to the lower portions, where the tissues were in a state of advanced disintegration. During life also the auscultating signs had indicated a dry condition of the upper parts very different from that met with in the lower. Very little pus was found in the cavity.

DR. WILLIAM P. NORTHRUP read a paper on

LARYNGEAL DIPHTHERIA; INTUBATION, AND PATHOLOGICAL ANATOMY.

He alluded to the conflict in Paris, in 1858, between Bouchut and Trousseau, regarding intubation of the larynx, which ended in the official declaration by the Académie de Médecine that this procedure was impracticable. Nothing more was heard of intubation for nearly thirty years, when the practice was revived by Dr. Joseph O'Dwyer; in whose hands it had been attended with such marked success that the method had now attracted an amount of attention which had not been met or equalled in the profession since the advantages of Es-march's tourniquet were made known.

He then proceeded to give a *résumé* of the statistics of all the cases of death from laryngeal diphtheria occurring during the last five years among the children under the care of the New York Foundling Asylum, who number almost 1800 per year; 1100 of these being intrusted to paid nurses, who look after the children in their own homes, and the rest being kept in the asylum buildings. During this period there were 87 deaths from the cause named; of which 50 were in females and 37 in males. The greatest mortality was noted in children between the ages of 3 and 4 years. In 56 of the 87 cases the membranes formed in the larynx either before or simultaneously with their appearance in the pharynx. In two cases, croup was the first symptom noticed, and death occurred within 20 hours. In 54 cases there was pneumonia, and broncho-pneumonia was very frequently met with. 27 children died from extension of the membranes into the bronchi, and in 29 the pneumonia alone was sufficiently severe to cause death. The highest temperature met with was, in 19, 104°; in 15, 105°; in 3, 106°; in 2, 103°; and in 1, 107°.

Having given the statistics of the extent of the membranous exudation, he said that in all but three of the 87 cases the membranes were very extensive. Interstitial emphysema occurred in 8 cases. There were 51 cases of primary diphtheria, and 31 in which the disease was nearly or remotely related to scarlet fever or measles.

Dr. Northrup exhibited a set of O'Dwyer's instruments for intubation, and explained the method of introducing and extracting the tube for the larynx. It is important, he said, that the child, wrapped in a blanket, should be held upright in the arms of the nurse, who, by grasping the elbows, secures a firm position without interfering with the movements of respiration. The gag is inserted in the left angle of the mouth, well back

between the teeth, and opened widely; and an assistant holds the head, thrown somewhat backward, while the operator inserts the index finger of the left hand to hook up the epiglottis, and direct the tube into the larynx. It is better to make several short attempts to introduce the tube than one prolonged effort, on account of the interference with respiration thus caused. The extraction of the tube is more difficult than its introduction, and Dr. Northrup, at the suggestion of Dr. O'Dwyer, recommended that physicians should practise both introduction and extraction on the cadaver. The procedure, however, is easier in the living child.

Those beginning to practise intubation, he said, are apt to use too small a tube, with the result that it is coughed up. This mistake, however, can easily be avoided by taking proper care to use the right sized tube for the age of the child, as indicated by the scale furnished with each set of instruments. There is, however, no danger of the tube slipping down into the trachea, as some seem to fear. In the first place, no case of such an accident is on record; and, secondly, it will be found that the head of the tube is always caught by the cricoid cartilage, which is situated at the narrowest point of the passage. Moreover, there is no danger of ulceration of the vocal cords being caused by the tube.

If the condition of the child appear favorable for forty-eight hours after the insertion of the tube, the prognosis is good; but it is entirely unsafe to give a favorable prognosis at any period before the expiration of the forty-eight hours. Not infrequently the greatest possible relief is afforded temporarily by intubation in cases which afterward terminate fatally by the extension of the membranes, or the occurrence of pneumonia. Dr. Northrup also spoke a word of caution in regard to withdrawing the tube too soon. Whether it is advisable to reintroduce the latter in any case will be shown by the examination of the chest. If, on auscultation, the vesicular murmur is normal, there is no cause for uneasiness; but if it is found that the air can not get into the lungs well, especially in the posterior portions, it is time to reintroduce the tube. The condition of the pulse also serves as a valuable guide. If the child is not very young, the tube can usually be removed in five or six days.

After mentioning to the kinds of food most useful and easily taken after intubation, he referred to the cases reported by Dr. Jennings, of Detroit, four in number, all of which terminated fatally. Dr. Jennings recommends tracheotomy in preference; stating that he has had ninety-five per cent. of cases of recovery in this operation. Dr. Northrup called attention to the fact, however, that his cases of intubation were of a very unfavorable character. Still, Dr. Jennings recommended intubation in children under fifteen months old, and in hopeless cases; believing that it was a supplement to, though not a substitute for tracheotomy.

Having mentioned that O'Dwyer's tubes are of great service in stenosis of the larynx in adults, and particularly when the condition is due to syphilis, Dr. Northrup gave his conclusions in regard to intubation as follows:

It relieves dyspnoea due to laryngeal stenosis. There are few objections to the method, and it is comparatively simple and free from danger. No anæsthetic is

required. No trained assistant is required. There is no fresh wound to serve as a point for new impaction. If it proves inefficacious, tracheotomy can still be performed. It has one conspicuous fault, viz., that it embarrasses and sometimes interferes with deglutition.

There is also some danger connected with it. The tube may possibly push some of the tenacious membrane down before it, and thus cause a blocking up of the trachea below.

He then asked, Does it meet the requirements? and argued that the statistics show that it does. Waxham has had 96 cases, and O'Dwyer 48. In all, 165 cases have been reported. Dr. Northrup stated that 28½ per cent. of these had recovered.

It is to be remembered, too, that the operation is still new. Valuable experience has been gained, and it can scarcely be doubted that in the future the results will be even more favorable. The statistics of tracheotomy show no such satisfactory result as this, and he believed that if all the fatal cases of the operation were reported, the percentage of mortality would be considerably larger than it now appears.

DR. FRANCIS HUBER said that he had performed intubation eleven times. The special symptoms for which he had resorted to it are aphonia, stridulous expiration and extreme recession of the chest-walls above and below the sternum. The first two cases were in very young children with extensive diphtheritic deposit, and both proved fatal. The third was in a child two years and three months old, and was followed by recovery. The fourth was in a child six years old, in whom croup occurred as a complication of measles. The fifth was a case of diphtheria, in which death resulted from double pneumonia. The sixth was in a girl three years old, suffering from croup and measles. The membranes became gangrenous, and the child died in uræmic convulsions. The seventh was in a child twenty-seven months old, suffering from diphtheria. The eighth was in a child with diphtheria, who had an old endocarditis. The tube was removed at the end of six days, but two days later he was called in and found that the stenosis had returned. The child had been carelessly exposed, and a new laryngitis had been set up. The tube was again introduced, and allowed to remain three days; after which the patient recovered. The ninth was a case of croup with measles, in which death occurred from pulmonary œdema. In the tenth case, in which intubation was practised the previous day, the child is still alive, but it is probable that death will soon occur from pneumonia. In the eleventh case, which was also intubated the same day, the child was moribund at the time, and died soon afterward.

Out of the eleven cases there were four recoveries, while one child was still wearing the tube. Ten had died, and one other would probably do so. These results are much better than he had obtained with tracheotomy. He had performed this twelve times, but had saved only two out of the twelve children. He stated, also, that in all his cases of intubation, the method was resorted to very late. In conclusion, he exhibited a modification of the O'Dwyer gag, devised by his friend, Dr. Emhard, who had also had several cases of intubation. Five of these were successful, and all of the eleven, like his own, were late cases.

DR. ALEXANDER S. HUNTER said that he had prac-

tised intubation twice, both times in cases in which he was called in consultation. The first case was that of a child, six years of age, who had been suffering from membranous croup for two days. The stenosis was extreme, and pulmonary oedema was coming on. He introduced the tube with little difficulty, and the relief was immediate and most marked. After forty-eight hours, however, he saw the patient again, and found the respiration very rapid. He had great difficulty in swallowing, and he found that by giving it a large quantity of nourishment at a time it got along better than if the attempt was made to give it by the teaspoonful. The pulmonary trouble was now so great that it was evident that the child could live but a few hours longer. He therefore removed the tube, and it still breathed quite well; but died some hours afterward.

The second case was in a child, two and a half years old, with diphtheria, who had a temperature of $103\frac{1}{2}^{\circ}$. There was marked stenosis, and it was almost completely asphyxiated. The relief afforded by intubation was prompt, as in the other case. The next day the child coughed up the tube, and it was reintroduced by the attending physician; but death ensued in five or six hours. Dr. Hunter stated that he had practised intubation five or six times on the cadaver before he attempted it on the living subject.

DR. E. L. PARTRIDGE said that Dr. Northrup had mentioned that the only danger from intubation was the possible detachment of portions of membrane which might act as a diaphragm in the trachea below the tube. The same objection held true, however, in regard to tracheotomy, and he referred to a case in which fatal obstruction occurred in this way.

DR. A. G. CAILLE said that he had had one case, but intubation was resorted to so late a period that he thought it should not go on record. He believed that the introduction of the tube would be more easily effected if the special points about the anatomy of the parts are carefully borne in mind.

CINCINNATI ACADEMY OF MEDICINE.

Stated Meeting, November 22, 1886.

THE PRESIDENT, JAMES T. WHITTAKER, M.D.,
IN THE CHAIR.

DR. T. A. REAMY read a paper on

ERGOT IN LABOR AND PUERPERAL CONVALESCENCE,
WITH PROTESTS AGAINST THE EXTENT TO WHICH IT
IS EMPLOYED.

He said that the field of utility for ergot has faded from the rather extensive indications given by Stearns in 1807 to the canonical law of banishment by Barnes in 1885. Its dangers have been proclaimed ever since its introduction, and the long list of injury and death in the catalogue of recorded accidents is a solemn warning against its indiscriminate employment.

The character and extent of the evils of ergot are so well known that they need only be mentioned. Lacerations of the perineum, vagina, and cervix, retention of the placenta, the death of the child, acute toxic ergotism and gangrene, the rupture of the uterus and the death of the mother, all offer abundant evidence of the frightful energy of ergot and its consequent perils. Yet,

notwithstanding this startling category of possible dangers, and these numerous lines and precepts of caution, ergot is to this day the most generally abused agent in obstetric practice.

We are perfectly well aware of the almost universal practice among midwives of administering this drug at any stage of labor when the progress is at all tardy, and when it is considered that in this city seventy per cent. of labors are attended by midwives, we must tremble at the perils to parturient women. Nor is this evil practice confined to midwives. It is within his personal knowledge that there are very many physicians, both in city and country practice, who employ this agent very extensively before the end of the second stage of labor.

He expressed his firm conviction that the cases are extremely rare where the exhibition of ergot prior to the termination of the second stage of labor is justifiable, and in these rare cases of ante-partum uterine inertia, which have resisted other means of securing contraction, the ergot should be given in small doses with caution. It will not be claimed that these restrictions are more radical than the rules given by almost every modern obstetric writer of reputation, as already cited in this paper. Nevertheless, it must be confessed that this teaching is too often disregarded. The practitioner does not discriminate. He knows that ergot certainly and powerfully increases uterine contractions, that contractions consummate delivery. He therefore gives ergot to shorten the duration of labor, and the evils follow.

The objections to the administration of ergot before the close of the third stage of labor are equally positive, though the dangers of rupture of the uterus, death of the child, laceration of the cervix or perineum are not now in the count. Closure of the uterus with incarceration of the placenta is no uncommon result from the practice, since it is a well-observed clinical fact, though difficult to explain, that the action of ergot tends especially to close the os internum, the ring of contraction of Schröder, rather than to produce expulsive contraction of the upper portion of the uterus. Should the placenta not be retained, clots are retained in the uterine cavity rather than expelled, by virtue of the same faulty character of contraction. But a still greater evil is hidden in this question, so that it is not generally seen, namely: The rigid contraction secured by the ergot does not result in thickening of the uterine walls in the upper segment, the region of placental attachment, with corresponding thinning of the walls in the lower segment of the uterus. In other words, it does not promote and secure retraction, a condition essential, first, to permanent protection against hemorrhage; second, to the first steps in involution. This condition of perfect retraction is only secured by the intermittent contractions and relaxations which normally occur in execution of the physiological law governing the uterus at such a time. If from any cause these contractions are too feeble, they may be strengthened by friction upon the abdomen, gentle compression of the uterus through the abdominal wall, or, if need be, by suitable doses of ergot. But it is here that he wished to enter his emphatic protest against the practice so extensively adopted of administering a drachm of the fluid extract of ergot immediately upon delivery of the placenta. Not only does he protest against this single dose, but against the custom of continuing the exhibition of full doses three times a day for

several days, though he advises the use of small doses sufficient to maintain healthy uterine contraction in all cases where the natural muscular tonicity is inadequate.

It is proper that further reasons be given for these protests. Important objects of treatment during the puerperal period, must be to secure perfect involution, and provide against subinvolution, a disease whose prevalence and disasters are common knowledge, but whose causes are not always clear.

It is admitted, however, that proper uterine retraction is essential to involution. A clear conception of the processes by which retraction is reached, is of importance in this inquiry. By retraction is meant not only the gradual drawing up of the contraction ring of Schröder, by the shortening of the longitudinal fibres of the body and fundus in process of contraction, but also the general rearrangement of the muscular fibres of the whole organ, both during and subsequent to delivery. This rearrangement so disposes the fibres that those previously placed end to end now become situated side by side. Thus a general thickening of the uterine walls ensues, and consequently the vessels are both compressed and rendered more tortuous.

After-pains are nature's expression of the rhythmical attempts of the muscular fibres to rearrange themselves, and normal retraction is secured by rhythmical contractions which persist after labor. These contractions are not always painful, for they are frequently carried on, as is evinced by the alternate hardening and relaxation of the uterus, without the patient's knowledge—that is, without after-pains.

Involution is both a constructive and destructive process, and it really begins with the degenerative changes which are set up in the muscular fibres with the first pains of labor. These contractions gradually lead to the destruction of the muscular cells, in common with the rules of function in muscular cells everywhere. Rhythm of contraction is essential both to their function and to such gradual destruction as will insure their subsequent absorption as fatty detritus. Persistent tonic contraction defeats the proper performance of their function in the exhaustion or paralysis which follows. Exhaustion follows because they are no longer able to secure sufficient nutrition, during relaxation, to induce them to perform another contraction, a condition readily fostering hemorrhage.

Every careful obstetric clinician has observed cases in which, after delivery of the placenta (the speaker did not now refer to cases in which ergot had been given), the uterus presents by palpation through the abdominal wall, the condition of stony hardness which is in strong contrast with the condition of firmness, marking the state of retraction. This hardness of the uterus is due to powerful tonic contraction, and if it be observed to persist for several minutes, the experienced physician recognizes in it unerring evidence that within a short time muscular paralysis will occur, the uterus becoming flabby and hemorrhage ensuing. This paralysis is due to muscular exhaustion, consequent upon the persistent violence of the contraction.

It is claimed by Cazeaux that uterine contraction, secured by a full dose of ergot, is maintained for about one hour and a half. Dr. Reamy's observations show that the period is longer. However, one hour and a half of persistent contraction is sufficient to produce muscular

paralysis. The stony hardness of the uterus under such contraction by ergot, is identical with that above spoken of. The wise practitioner will not leave the bedside of his patient until the above-named hardness of the uterus is replaced by the firm but softer state of retraction, which, as already indicated, can only be reached after alternate contractions and retraction have intervened.

The foregoing remarks touching the question of hemorrhage may furnish a clinical lesson worthy of consideration, but the object in presenting these facts is for the illustration of principles germane to the discussion of the relations of ergot to subinvolution of the uterus by its interference with rhythmical contraction. It is the disturbance of rhythm, however, in the degenerative processes which prepare the hypertrophied uterine elements for absorption, which is of most importance in this study.

Dr. M. Putnam Jacobi has called attention to the relations existing between the arterial and venous circulation in the gravid and puerperal uterus. "There is," she says, "a tendency to venous excess in the uterine tissues from the moment of conception to the end of pregnancy;" and we all know that venous hyperæmia is the condition most favorable to growth, and the uterine changes during the entire time are those of simple growth alone.

"When the first pains of labor begin, the venous excess is cut off by the clogging of the sinuses at the placental site with giant cells," and a relatively greater amount of arterial blood fills the uterus. This arterial blood, bearing the oxygen of nutrition, stimulates the large muscle cells into contraction—that is, into the first performance of the function for which the gestative growth has prepared them. These contractions compress the veins and thus further diminish the venous supply. This process ultimately expels the ovum and checks venous hemorrhage from the placental site by venous thrombosis.

After the ovum is expelled, an excess of arterial blood is still required intermittently, not only to produce the retraction induced by the after-pains, but also to furnish the oxygen necessary to the gradual reduction of the now unnecessary elements into fatty detritus preparatory to absorption. The facility of absorption by veins and lymphatics depends upon the relative difference between the venous and arterial tension.

In order to secure rapid and successful involution, a certain relation must exist between the venous and arterial pressure. An excess of venous blood will check involution and conduce to subinvolution, both by checking fatty degeneration and disabling absorption. On the other hand, excessive rise of arterial pressure, and tonic contraction of the uterus, also interfere with the necessary degenerative changes, by delaying the constructive changes in the endometrium, which, since they are processes of growth, are best performed under low pressure—venous hyperæmia.

At the placental site, as well as in a less degree throughout the endometrium, after the separation of the placenta and decidua, an important process of repair must be speedily instituted. This is important as prophylaxis against sepsis and subinvolution. It is at this part of the organ that degeneration and growth must go hand in hand. By the degeneration of the lacerated

membrane and its voidance through the lochial discharge, and by the stimulation of the venous blood to growth, a new endometrium is formed. When the uterus is injected, the veins blue and the arteries red; soon after parturition it is seen that while there is excess of arterial vessels, this excess is less manifest the nearer the endometrium is approached, showing that there is relatively more venous blood in this situation than further out in the muscular walls.

Further corroboration of this condition is found in the fact that the endometrium is entirely reformed much earlier than the complete reduction of the remainder of the organ. In the deeper parts of the uterine walls both degeneration and growth must occur. The new uterus is chiefly formed from the development of the muscular nuclei, while the enormous fibres of the gravid state are reduced to fat and absorbed in the course of involution, this process being slower than that in the endometrium, as a result of the greater relative excess of the arterial blood. Thus the result of a nice balance, a proper relation between arterial and venous pressure in the process of uterine involution is apparent. It is, therefore, manifest that the disturbance of this essential relation by the stony tetanic contraction maintained by full doses of ergot will defeat proper and speedy involution, will prolong the puerperal period, and will indirectly foster subinvolution.

Again, the tonic contraction of the uterus for an hour and a half after the expulsion of the placenta, is an objection to the employment of a full dose of ergot at this time, in that it confined to the general circulation a considerable quantity of blood which is normally lost in the intervals of relaxation which should occur. A certain amount of hemorrhage at parturition is conservative. Instead of blood being required for the sustenance of two lives, there is now only one, and that one requires less than before, because it is no longer required to sustain the laborious functions of the hypertrophied uterus and vagina.

Moderate hemorrhage is likewise conservative in permitting the loss of blood from the uterus, surcharged with the effete products of its recent extreme activity.

He said that it must not be forgotten that he was speaking of the effect of full doses of the drug. H. C. Wood, and many others, are authority for the statement that small doses—a few minims of the fluid extract, or a single grain of the solid extract—will only increase the force of the uterine contractions, and not affect the periods of relaxation—in other words, will not disturb rhythm in action. His own experience confirms this view. With small doses, where proper indications exist, he makes no issue.

The following should be the rules governing the administration of the drug:

1. Ergot may properly be administered in small doses, say ten to twenty drops of Squibb's fluid extract, before delivery, in cases of uterine inertia which resist other means; and especially in women who are predisposed to hemorrhage.

2. It should be administered in full doses hypodermatically, or per os, or both, in cases of post-partum hemorrhage.

3. When an anæsthetic has been freely used during the second stage of labor, it to some degree predisposes

to post-partum hemorrhage. Ergot is, therefore, indicated.

4. It should be administered in small doses, two or three times daily, during the period of puerperal convalescence, whenever a flabby uterus indicates it. In such cases there is no better combination than the pill recommended by Mundé: one grain ext. ergot, one grain of quinine, and one-fourth of a grain ext. nuxvomica.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, November 8, 1886.

DR. C. MCBURNEY IN THE CHAIR.

DR. GEORGE A. PETERS reported two cases of

RADICAL CURE OF HERNIA.

Case I.—Michael McG., Irish, aged forty-one, admitted into St. Luke's Hospital May 4, 1885, with double inguinal hernia—that upon the left side being much the larger of the two. Twelve years ago, while lifting a child at arm's length, he "felt something give way;" there was but little pain although a "small lump" was observed in the left groin. A physician whom he consulted pronounced it to be a hernia, and directed him to wear a truss, which he did for about two years, after which time, as he experienced no pain or inconvenience and the tumor was very small, he discontinued its use. Three years ago, while lifting a heavy weight, the tumor immediately became much larger and was attended with sharp pain in the lumbar region, for which he remained in bed for a week or two. Since this time he has never been able to hold up the hernial swelling with any truss which he could procure.

Eight years ago he came violently in contact with a "sharp corner," and a small bubonocoele appeared in the right groin. This gave him no trouble until he lifted the heavy weight three years ago, after which time both his herniæ became large and painful. For the year or two past he has grown very fleshy. Summing up, this is his condition on admission to the hospital, viz:

On the left side is a large, indirect inguinal hernia, easily reduced excepting a small knuckle of intestine apparently adherent to the sac. The pillars of the ring are readily defined and very much spread, easily admitting four fingers. On coughing or straining a large mass of intestine comes down measuring three by six inches. The inguinal ring upon the right side easily admits two fingers and the edges are sharply defined. On coughing only a small bubonocoele comes down.

Family history and general condition good, except that he had been drinking freely of spirits for some time. As he suffered so much from the size of the tumor and the fact that he could not wear a truss, Dr. Peters determined, after consultation with his colleagues, to perform Banks's operation for the radical cure of the hernia in the left groin.

May 7th. Patient was put upon the table for operation, and with much delay brought under the influence of ether. During almost the entire time of the inhalation he vomited, coughed, and struggled so that it made the performance of the operation one of great difficulty. A free incision was made through the skin commencing just above the level of the external abdominal ring and the dissection carried carefully down, layer by layer,

until the sac was exposed and the pillars of the ring brought distinctly into view. The ring was very large and patulous (easily admitting four fingers). The hernia was now reduced by gentle taxis, leaving the collapsed sac in the wound. The cord was found behind and well out of the way. The sac was now opened and a knuckle of gut was found closely adherent to its wall just at a level with the ring. It was not deemed prudent to attempt its separation and it was left as found. The opening of the sac was now carefully and with much difficulty stitched to the pillars through and through with stout catgut and the ring closed.

Owing to the restlessness of the patient under ether and frequent attacks of vomiting, the bowels were forced down in a large mass and spread out upon the outside of the belly. The protruding bowel was carefully guarded with towels and sponges wet with hot water. This stage of the operation was exceedingly difficult and prolonged. It was, however, finally accomplished. A great portion of the sac was now dissected out, two bone drainage tubes introduced and the wound closed with carbolized catgut and an antiseptic dressing over all. During the escape of the bowel the pulse sank very low and he suffered much from shock, but was finally restored by brandy, ether, and digitalis hypodermatically administered. Patient suffered very much from nausea, pain, and tympanites for a few days after the operation, but these symptoms gradually subsided. The wound did not heal throughout its whole extent by first intention, but remained open at the two angles, gradually filling up with granulations until June 17, 1885, when he was discharged cured.

Case II.—Alice S., Irish, aged fifty, married, was admitted into St. Luke's Hospital January 22, 1886. Six years ago, after lifting a heavy weight, she noticed a "small lump" in the right groin; finding that it did not disappear after a few days, she entered Roosevelt Hospital, where she was treated for a short time, but no operation was performed. Ever since that time she has "felt a weakness" in the right groin, and, on exertion, a reducible tumor would appear. Has never worn a truss. Ten days ago, after a severe strain, the tumor appeared; was painful, and increased in size; the bowels were constipated, and she suffered somewhat from nausea. On admission, examination revealed a tumor in the right groin, below the inner third of Poupart's ligament, globular in shape, about one inch in diameter, elastic to the touch, slightly painful on pressure, and dull on percussion. A portion resembling a pedicle extends down toward the femoral canal. Before admission, attempts had been made to reduce it by taxis, but without success. The attempt was renewed after admission, with no result except to occasion local inflammation and considerable pain. She was ordered strict decubitus, and the cold coil was applied.

The tumor was considered to be an incarcerated femoral hernia, contents chiefly omentum, and, after consultation, Dr. Peters determined to perform Banks's operation, hoping to make a radical cure.

February 5th, she was put upon the table, ether was administered, and she was quickly brought under its influence. The integument of the groin and neighborhood was shaved, scrubbed, and rendered aseptic. An incision about two inches long was made over the convexity of the tumor, and the dissection was carefully

made down toward the sac. The connective tissues in this neighborhood were matted together, thickened, and extensively adherent to the sac itself. These adhesions were carefully dissected away, and the sac opened, allowing the escape of some yellowish fluid. When brought into view, the contents of the hernial sac were found to be a sheet of omentum enveloping about three inches of the vermiform appendix, the distal portion of which was doubled upon itself, allowing the knuckle thus formed to project above the omentum, resembling a gland, for which it was indeed mistaken until the unravelling of the tissues determined its true character. The contents were adherent to this sac, but were dissected free, and the vermiform appendix and omentum were separated down to the ring, where each was separately ligated with stout catgut, and cut off. The portion of the appendix vermiformis removed was two and a half inches long, and about the size of a goose-quill. The sac was now tied off, and with the stump which was left just at the femoral ring was stitched through and through with catgut. A rubber drainage tube was now inserted to the bottom of the wound, and the skin closed over with fine catgut suture. During the operation the wound was frequently irrigated with solut. hydrarg. bichlor., 1 to 1000. The dressing was iodoform gauze and spica bandage. The first dressing was not disturbed until February 10th, when the drainage tube was removed, there being perfect union except where the tube emerged. During the progress of the cure a small collection of pus occurred, which somewhat delayed the healing. Discharged cured March 9, 1886.

On presenting these two cases of operation for the radical cure of hernia, he desired to call attention to complications occurring in both of them. In the case of McGowan, who took ether badly, on opening the sac a large mass of intestines was forced by his efforts to vomit, through the distended and flabby ring, and was the source of much embarrassment and considerable danger until they were returned. The principal assistant should guard very carefully the open ring, and check the first attempt at escape. The danger from shock will be much lessened if the truant gut be kept carefully protected by hot, wet sponges.

In the case of femoral hernia, a complication presented, namely, the appendix vermiformis, which he did not remember to have seen in any hernial sac which he had opened. In this case it was, when first seen, supposed to be a gland, but as the mass was unrolled its identity was established. As the hernial mass was adherent to the neck of the sac, it was determined to ligate the entire protrusion, so that it might act as a plug. On examining the appendix after its removal, it was found to be pervious down to the very tip, but contained no fecal matter. The wound of operation healed kindly, and the presence of the divided appendix seemed in no way to retard the cure.

Of all the methods which have been adopted for the radical cure of hernia, the one described above, and introduced to the notice of the profession by Banks, of Liverpool, is the most rational to the student, and captivating to the surgeon. The experience which most of us have had with the operations of Heaton by injection, and with the needle and wire, has not, he ventured to say, been so satisfactory as to convince us that nothing better can be devised.

The methods of procedure adopted vary according to the theories or experience of different surgeons. Some use the silver wire, others aseptic silken thread, and others carbolized catgut. The result of my experience and observation inclines me to advocate the catgut properly prepared, so that it will not dissolve too readily. Union by first intention in the wound is not so desirable as might at first seem. A sufficient amount of inflammation to produce a dense thickened mass of tissue, provided this be the result of suppuration and granulation about the ring and canal, is to be preferred. That the operation is a reasonably safe one is, he thinks, proven by the results already obtained. When the cases are properly selected, and the operation done with all modern precautions, the percentage of recoveries is large, as in the cases reported by Banks and others abroad. Even when such precautions are not observed, the statistics show a death-rate of only one in eight.

In cases where the hernia is large, and subjects its owner to much pain and discomfort, where it cannot be entirely returned, or, if returned, cannot be kept in place with a truss, this operation is indicated. Even if it should not result in a perfect cure, the patient will be so much improved as to be able to wear a truss with comfort, and become again a bread-winner.

DR. GERSTER remarked that, in regard to the name given to the operation by Dr. Peters, a very similar operation was first performed by Prof. Czerny, of Heidelberg, and he thought the precedence belonged to him. As regards the use of ether in herniotomy causing vomiting, he would mention the case of a very fat man who was admitted to the German Hospital, suffering from a massive scrotal hernia. The inguinal opening was large enough to put in the fist. The patient bore ether very badly—that is, coughed and choked so incessantly as to render operating impossible—and he changed to chloroform, and immediately the respiration became quiet, cyanosis disappeared, and the operation could be completed without interruption. Ether was borne very badly, although a hypodermatic injection of morphine had been administered previous to anæsthesia.

DR. LANGE asked if any one had any experience in McEwen's (Edinburgh) operation for hernia, in which the sac is pushed back into the properitoneal space, and the pillars of the ring closed in such a manner as to make a valvular closure? Dr. Lange had performed the same operation three times, but could give no definite statement as to its value.

DR. WEIR remarked that he had performed the operation a few days previously.

DR. STIMSON asked what sutures were used.

DR. LANGE replied he had used silk once, silkworm gut once, and catgut once.

DR. PETERS asked if the gut did not give way.

DR. LANGE replied that the cases were only very recent, although the wound was healed; that this was the third week after the operation, and there had been no trouble, but even at the time he used the catgut against his better judgment, as he had nothing else on hand.

DR. WEIR remarked that he used catgut, as he thought it was best, as the wound would heal without any trouble. With the use of the silver wire a sinus was frequently kept up until the suture was discharged or removed. In his hands the wound only exceptionally

closed over the wire. Silk had a similar objection to it.

DR. LANGE said he had not used silver wire; he thought the silkworm gut was best.

DR. WEIR stated he had tested the use of catgut, and found it would last nearly two weeks.

DR. ABBE said that he had used silver wire in three cases, and it had caused ulceration, although he had used great care. In one case, although suppuration occurred, it granulated over the wire. He had operated for hernia over forty times. The use of silver wire, advocated by Banks, is his only modification of the German method.

DR. WYETH asked Dr. Abbe how many of his cases had been really cured? how many had been able to go without a truss?

DR. ABBE thought about one-third or one-fourth have a recurrence of the hernia at about the end of two years, the majority going from one to two years. He thought, with a light truss, they would be able to attend to their duties for many years. He thought a very important point was that the femoral hernias are almost invariably cured, while the inguinal are more difficult to cure. He thought it was those cases (the femoral) which often can go without a truss after the operation.

DR. WEIR remarked, as to this point of recurrence, he thought the method of leaving the wound open, filling it with iodoform gauze, and allowing it to heal from the bottom, would give better results. It had given satisfactory results in his cases for the past two years, and he was led the more to place reliance on this procedure. Since then it had also recently been advocated by Nussbaum, who treated the wound openly after a free employment of the actual cautery.

DR. WYETH said that, out of the number of cases in which he had operated for the radical cure of hernia—some strangulated and some not—in all about twenty cases—he really could not state positively that more than two had been cured.

NEWS ITEMS.

VIENNA.

(From our Special Correspondent.)

LIGATURE OF BOTH SUPERIOR THYROID ARTERIES FOR DIFFICULT RESPIRATION IN GOITRE.—At a recent meeting of the Imperial Royal Society of Physicians of Vienna, PROF. WEINLECHNER exhibited a woman with goitre, in whom he had ligatured both superior thyroid arteries on account of great difficulty of respiration, and the operation afforded marked relief.

The patient, aged thirty-three, was affected with goitre since her childhood, at last the tumor increased in size. On the eighth of October she came into Prof. Weinlechner's clinic, exhibiting a livid color with great difficulty of respiration, which increased on the slightest movement. On the right side, the goitre was the size of a fist; on the left, it was somewhat smaller. On the upper part of each half of the tumor the superior thyroid artery appeared much distended; her voice has been since childhood somewhat hoarse, but there was no affection of the larynx. As there was much difficulty of respiration, Prof. Weinlechner was anxious to perform a total or a partial extirpation of the tumor, and

for this reason ligatured, after the method of Wölfler, both superior thyroid arteries. As both arteries could be well felt on both sides, the operation was not difficult. Prof. Weinlechner remarked that the patient felt better immediately after the operation, the trouble of respiration diminished, and the goitre has since shown a decrease of seven centimetres in size. He said he would, perhaps, later, ligature also the right inferior artery. What was remarkable in this case was the fact that, soon after the operation, the patient had a series of spasmodic attacks, which disappeared after the lapse of some days. There was, however, no question of tetany, as during the attack there were also present clonic cramps, and the face showed great congestion.

PARIS.

(From our Special Correspondent.)

TRANSMISSION OF SYMPTOMS OF HYSTERIA UNDER THE INFLUENCE OF A MAGNET.—M. BABINSKY, in a paper read at the Paris Biological Society, stated that, under the influence of a magnet, certain hysterical symptoms may be transferred from one person to another, even should these persons be placed at some distance from each other. In a first series of experiments, practised upon two hysterical-epileptic patients capable of being hypnotized, the hemianæsthesia from which they suffered was transmitted from one to the other, as well as other symptoms produced in one of the patients by suggestion; different forms of paralysis, brachial or crural monoplegia, hemiplegia, paraplegia, coxalgia, dumbness, etc. In a second series of experiments, one of the above mentioned patients was placed in communication with patients suffering from different forms of hysterical spontaneous paralysis. These symptoms were transmitted to the hypnotized patient, but continued in the patients who exhibited them. After two consecutive experiments an improvement was observed in one case of spontaneous paralysis. In a case of hemiplegia following an hysterical attack, M. Babinsky succeeded in causing the disappearance of paralysis after four consecutive experiments, such as above described. A method of treatment is thus determined. The author has proved by other experiments that hysterical symptoms are not the only ones capable of transmission. He succeeded in transmitting other symptoms, such as paralysis, tremor, etc., combined with organic changes of the nervous system. In these experiments, made in Dr. Charcot's ward at the Salpêtrière, suggestion or simulation was carefully avoided.

FIRE AT THE UNIVERSITY OF VIRGINIA.—The anatomical hall belonging to the medical department of the University of Virginia was destroyed by fire on the 20th of November. The loss is estimated at \$8000, a portion of which is covered by insurance. The medical course will not be interrupted in consequence of the loss sustained.

THE BALTIMORE ACADEMY OF MEDICINE has conferred its annual prize this year upon Dr. Frank Donaldson, Jr., and Dr. A. B. Arnold. These two gentlemen have submitted to the Academy papers of equal merit. Dr. Donaldson's paper was on "Diaphragmatic Pleurisy," and Dr. Arnold's on "Circumcision."

A CHAIR OF ORTHOPÆDICS IN NAPLES.—The Italian Minister of Public Instruction has officially established a chair of orthopædic surgery at the University of Naples, designating Professor D'Ambrosio for the first incumbent.

A CURIOUS SEWAGE CASE was decided in a Detroit court, the other day, involving the right of a citizen to use a sewer constructed by private subscription in which he had refused to join. The Polish residents of a suburb since included within the city limits, had built the sewer, and asserted the right to exclude the non-paying neighbor from its benefits. In making his connection with the sewer, this person was assaulted by the Poles, and called in the police, by whom he was protected in the operation, and several of the Polish defenders of what they supposed to be their property were arrested. They sued for trespass and false imprisonment, and were nonsuited.

JACCOUD'S DICTIONARY.—The fortieth and concluding volume of the *Dictionary of Practical Medicine and Surgery*, which has been brought out by Dr. Jaccoud, Professor of Clinical Medicine in the Faculty of Medicine of Paris, has just appeared. The complete work, the production of which has occupied many years, contains 33,000 pages and 3600 illustrations.

ENGLISH BERI-BERI COMMISSION.—Drs. Pekelharing and Winkler, of Utrecht University, have been commissioned by the Colonial Minister of Holland to proceed to the East Indies for the purpose of investigating the causes of Beri-beri.

DEATH UNDER CHLOROFORM.—An inquest was recently held at the Manchester Workhouse, Crumpsall, on the body of a man who died while under the influence of chloroform, administered for the performance of an operation. The jury returned a verdict of "Death from misadventure," and were of opinion that the drug had been skilfully and properly administered.

CHARGES FOR DISINFECTING IN BERLIN.—A public disinfecting station has been established by the Berlin civic authorities, where as far as possible high-pressure steam is employed. For such articles—leather goods, for example—as would be injured by this process, chemicals are substituted. The charge is one dollar for each cubic metre of space occupied in the disinfecting chamber, while the articles requiring chemical treatment are charged at the rate of 80 pfennings, or less than twenty-five cents each per hour of treatment.

PASS AND PLUCK IN PRUSSIA.—During the past *annus medicus* in Prussia, of 434 candidates for the State examination for practitioners, the "one portal" to the profession, 175 were rejected, while 259 passed, 16 of them with the distinction "very good." Of 220 candidates for the pharmaceutical license, 190 passed, 30 being rejected.

CREMATION.—On November 11th, the tenth cremation took place at the crematorium belonging to the Cremation Society of England, at St. John's Woking. The remains were those of a lady, aged forty-one, and

they were brought from the residence of the deceased in Leicestershire. The ashes weighed 3 lbs. 15½ ounces. It has been stated that the crematory is offensive during incineration of a body, but this is utterly untrue. Even to anyone standing on the crematory platform there is an entire absence of smell from even the burning wood, and no one could tell whether a cremation was taking place or not, so far as the sense of smell goes. This statement is but due to the founders of the Society, who chose the best system extant, a system which has been approved by the Paris authorities for erection at Père la Chaise.

A FUNGUS DEVELOPED IN HUMAN SALIVA.—M. Galippe, having filtered saliva by means of Pasteur's apparatus, the filtered saliva remaining undisturbed, saw appear at the lower end of the filter, not in contact with the saliva, a mushroom made up of tubes of mycelium and of spores. By the advice of Prof. Max Cornu, M. Galippe has cultivated this fungus in Van Tieghem cells, and has been able to prove that it was neither an *aspergillus* nor a *penicillium*. This fungus, which has neither been described, nor drawn heretofore, belongs to the monilia family. M. Galippe proposes to give it the name of *Monilia spiculicola*.

WOMEN AS SANITARIANS.—The ladies of Beekman Hill and vicinity in New York City, have been organized into a Ladies' Health Protective Association since December, 1884. The Society now numbers 150 paying members. Their work met with a quick reward, and, for a time, nuisances were scarce. This success, possibly, made them less active, but now several nuisances have required new activity. They have attacked the slaughter-house nuisances, manure storage grounds, and the removal of all cows from the city. They will also undertake to better the condition of the tenement houses by compelling landlords to light halls by night and to keep them clean.

TYPHOID FROM A SINGLE DOSE.—M. DUJARDIN-BEAUMETZ has forwarded to the Paris Academy of Sciences a communication on the Pierrefonds typhoid cases last summer. M. Fernet, who occupies a high post at the Ministry of Public Instruction, his wife and family, hired a house at Pierrefonds, a fashionable resort near Compiègne, contiguous to two others. After they had rented it for the season they were told to beware of the water in the well. On this account they drank exclusively mineral water until the last day, when the stock was out, and the servants were too busy preparing to return to Paris to go to fetch some bottles from the chemist. Madame Fernet said, "For once surely there can be no harm in drinking the well-water." They drank it. Six out of the nine persons have since died, including one of the servants. The cook, two of the four children, and Madame Fernet had had typhoid fever before, and though attacked again by it after their return from Pierrefonds, have got through the illness. The well has been examined and is reported to contain the bacilli which are believed to be associated with typhoid fever. This is a common danger to which visitors to so-called health resorts, both on the continent and at home, are frequently subjected. The facility with which well-water is infected is hidden from the

population by the impunity with which filthy well-water may often be drunk by resident families who have become acclimatized, especially when that water is for the moment infected only by non-poisonous fecal matter, and this fancied immunity often leads to habits of carelessness, for which not only themselves, but their visitors have to suffer.

OBITUARY RECORD.—DR. CRIDLAND CROCKER FIELD died suddenly at his home in Easton on November 26. He was born in 1817, and began the study of medicine as a private pupil of Dr. W. E. Horner, and was graduated with honors from the University of Pennsylvania in 1837. Both his father and grandfather were physicians, as are also his sons, Benjamin Rush Field and G. B. Wood Field. The operations through which he was best known were the removal of a cervical tumor, with ligation and excision of a considerable part of the jugular vein; excision of the entire femur; excision of the entire radius; extirpation of the parotid gland, which difficult operation he had performed several times. These operations placed him in the front rank of modern surgeons. His favorite region for operating was the neck, from which he frequently removed tumors which had entirely encompassed the carotid artery.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM NOVEMBER 30 TO DECEMBER 6, 1886.

CALDWELL, DANIEL G., *Major and Surgeon*.—Granted twenty days' extension of his leave of absence.—S. O. 278, A. G. O., Dec. 1, 1886.

AINSWORTH, F. C., *Captain and Assistant Surgeon*.—Will repair to this city and report in person to the Secretary of War, and, on completion of the duty which may be required of him, will return to his station (New York City).—S. O. 280, A. G. O., Dec. 3, 1886.

BROWN, P. R., *Captain and Assistant Surgeon*.—Leave of absence for seven days, granted by post orders, is extended twenty-three days.—S. O. 124, *Department of Arizona*, Nov. 24, 1886.

FESSON, LOUIS S., *Captain and Assistant Surgeon*.—Granted leave of absence for four months, to date from November 13, 1886. S. O. 278, A. G. O., Dec. 1, 1886.

CLENDENNIN, PAUL, *First Lieutenant and Assistant Surgeon*.—Assigned to duty at Fort Davis, Texas.—S. O. 166, *Department of Texas*, Nov. 29, 1886.

ANDERSON, C. L. G. (recently appointed), *First Lieutenant and Assistant Surgeon*.—Ordered for assignment in Department of Arizona.—S. O. 277, A. G. O., Nov. 30, 1886.

BALL, ROBERT R., *First Lieutenant and Assistant Surgeon* (recently appointed).—Ordered for duty in Department of the Missouri.—S. O. 278, A. G. O., Dec. 1, 1886.

WOODHULL, A. A., *Major and Surgeon*.—Ordered for duty at the post of Fort Leavenworth, Kansas.—S. O. 138, *Department of Missouri*, Dec. 3, 1886.

CARTER, EDWARD C., *Captain and Assistant Surgeon*.—Leave of absence extended six months.—S. O. 281, A. G. O., Dec. 4, 1886.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING DECEMBER 4, 1886.

FARWELL, WM. G., *Surgeon*.—Detached from the "Kearsage," proceed home and await orders.

GATEWOOD, P. A., *Passed Assistant Surgeon*.—Detached from the "Kearsage," proceed home and await orders.